

# Test Specifications Fuel Injection Pumps (1A) and Governors

En

PES 2 A 80	C/D 310/3	RS 1322	EP/RSV 425-1500 A8B/C501D,704D	supersedes 5.74
PES 3 A 75/80	C/D 410/3	RS 1183	325-1400 A8B/C272D,495D,540D,742D	company KHD
		RS 1185	2011D,578D,1022D	engine F.. L 912
		RS 1320	325-1250A8B/C2085L	BF 6 L 912
PES 3 A 75/80	C/D 410/3	RS 1324	325-1150A8B/C275D,298D,491D,492D,493D	F..L 912 W
PES 4 A 75/80	C/D 410/3	RS 1183	(1075)494D,540D,578D,601D,604D	
	C/D	RS 1255	657D,705D,715D,694D	
PES 4 A 80	C/D 410/3	RS 1300	375-1150A8B/C590D	
PES 4 A 80	C/D 410/3	RS 2346(2523)	325-1050A8B/C532D,577D	
PES 5 A 80	C/D 410/3	RS 2327	325-1000A8B/C588D,598D,1032D,733D	
		RS 2347(2526)	375-1000A8B/C606D,	
PES 5 A 80	C/D 410/3	RS 2555	325- 900A7B/C494D,602D,634D,2011D	
PES 6 A 75	C/D 410/3	RS 1197	325- 750A7B/C633D,	
PES 6 A 75	C/D 410/3	RS 1326	EP/RS 275/1400A0B/C496D,	
PES 6A 80/85	C/D 410/3	RS 2273	325/1400A0B/C620D,	
		RS 2348	325/1650A0B/C2087L,	
		RS 2527	RQV 275-1400AB 757D,799D	
			RQ 275/1400AB 694D,798D	

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 1,9 + 0,1

mm (from BDC)

For all plunger-and-barrel assembly diameters!

Testoil-ISO 4113

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery "C" 7,5 cm <sup>3</sup> /100 strokes 3		Difference cm <sup>3</sup> /100 strokes 4	Control rod travel mm 2	Fuel delivery "D" 7,5 cm <sup>3</sup> /100 strokes 3		Spring pre-tensioning (torque-control valve) mm 6
		②						
1000	12	6,2-6,6		0,4	12	5,2-5,6		
	9	3,0-3,7			9	2,7-3,5		
	15	8,5-9,5			-	-		
200	9	1,9-2,8			9	0,7-1,4		

Adjust the fuel delivery from each outlet according to the values in

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery "C" 8 cm <sup>3</sup> /100 strokes 3		Difference cm <sup>3</sup> /100 strokes 4	Control rod travel mm 2	Fuel delivery "D" 8 cm <sup>3</sup> /100 strokes 3		Spring pre-tensioning (torque-control valve) mm 6
		②						
1000	9	4,1-4,5		0,4	9	3,1-3,5		
	6	1,2-2,0			6	0,1-0,6		
	15	10,3-11,4			-	-		
200	9	2,9-3,7			9	0,6-1,3		

Adjust the fuel delivery from each outlet according to the values in

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery "C" 8,5 cm <sup>3</sup> /100 strokes 3		Difference cm <sup>3</sup> /100 strokes 4	Control rod travel mm 2	Fuel delivery "D" 8,5 cm <sup>3</sup> /100 strokes 3		Spring pre-tensioning (torque-control valve) mm 6
		②						
1000	9	5,0-5,5		0,4	9	4,1-4,5		
	6	1,3-2,1			6	0,6-1,4		
	15	12,1-13,2			-	-		
200	6	0,1-0,9			9	1,4-2,2		

Adjust the fuel delivery from each outlet according to the values in

2-cyl.:

3-cyl.: 1 - 3 - 2  
0 - 120-240

4-cyl.: 1 - 3 - 4 - 2  
0 - 90-180-270

5-cyl.: 1 - 3 - 5 - 4 - 2  
72-144-216-288-360

6-cyl.: 1 - 5 - 3 - 6 - 2 - 4  
0- 60 -120-180-240-300

**B. Governor Settings** - page 3 - 13, Instructions page 11

**C. Settings for Fuel Injection Pump with Fitted Governor**

F .. L 912 - page 13 - 20

BF 6 L 912 - page 21

F .. L 912 W - page 22 - 25

**Testoil-ISO 4113**

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel Torque-control travel	
Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	rev/min	mm
1	2	3	4	5	6	7	8	9	10	11

425 - 1500 A 5 B 501 DL, 704 DL

loose	800	0,3-1,0				ca.26	425	5,5	1500	9,5-9,6
	X = 3,75						100	min. 19	1000	9,9-10,2
ca. 68	1540-1550 = 8,5						425	5,9-6,1	600	10,5-10,6
	1575-1605 = 4,0						610-670 = 2,0			
	1750 = 0,3-1,7									

325 - 1400 A 8 B 495 DL, 272

loose	800	0,3-1,0				ca.20	325	5,0	1400	10,2-10,3
	X = 4,5						100	min. 19	850	10,9-11,1
ca. 67	1440-1450 = 9,2						325	5,4-5,6	500	11,5-11,6
	1470-1500 = 4,0						500-560 = 2,0			
	1600 = 0,3-1,7									

325 - 1400 A 8 B 540 DL, 578 DL, 1022 DL

ca. 66	1400	12,0	without auxiliary spring			ca. 20	325	5,0	1380	0		
	1430	8,5					200	19-21	1000	0,4-0,6		
	1460	4,8	with auxiliary spring				325	5,4-5,6	600	1,2-1,4		
	1420	9,2-10,4				450	2,7-4,1					
	1500	2,0-3,4				660	0 - 1,5					
	1580	0,3-1,0										

325 - 1400 A 8 B 2011 DL

loose	800	0,3-1,0				ca. 20	325	5,0	1400	10,8-10,9
							100	min. 19	750	11,7-11,9
ca. 64	1440-1450 = 9,8						325	5,6-5,7	500	11,8-11,9
	1475-1505 = 4,0						500-560 = 2,0			
	1550 = 0,3-1,7						700	0 - 1		

**Testoil-ISO 4113**

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel Torque-control travel	
Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	rev/min	mm
1	2	3	4	5	6	7	8	9	10	11

425 - 1500 A 5 B 501 DL with pump 1255

loose	800	0,3 - 1,0				ca. 23	425	5,5	1500	10,5-10,6
	X	= 3,75								
ca. 66	1540	1550 = 9,5					100	min. 19,0	500	10,9-11,1
	1590	1620 = 4,0					425	5,9-6,1		11,5-11,6
	1725	= 0,3 - 1,7					610	670 = 2,0		
							750	0 - 1		

325 - 1250 A 8 B 2085 L

loose	800	0,3 - 1,0				ca. 18	325	7,8		
	X	= 4,0								
ca. 56	1290	1300 = 10,0					100	min. 19		
	1315	1345 = 4,0					325	8,2-8,4		
	1490	= 0,3 - 1,7					430	490 = 2,0		

Testoil-ISO 4113

325 - 1150 A 8 B 705 DL

loose	800	0,3 - 1,0				ca. 21	325	5,0	1150	10,6-10,7
	X	= 4,75								
ca. 54	1190	1200 = 9,6					100	min. 19	500	11,0-11,3
	1220	1250 = 4,0					325	5,4-5,6		11,6-11,7
	1300	= 0,1 - 1,7					390	450 = 2,0		

325 - 1150 A 8 B 705 DL with pump 1300

loose	800	0,3 - 1,0				ca. 17	325	7,8	1150	11,0-11,1
	X	6,25								
ca. 52	1190	1200 = 10,0					325	8,2-8,4	500	11,4-11,6
	1235	1265 = 4,0					460	500 = 2,0		11,6-11,7
	1400	= 0,3 - 1,7								

325 - 1150 A 8 B 715

loose	800	0,3 - 1,0				ca. 17	325	7,9	1150	9,0-9,1
	X	= 4,0								
ca. 52	1190	1200 = 8,0					325	8,3-8,5	500	9,5-9,8
	1205	1235 = 4,0					445	505 = 2,0		10,5-10,7
	1400	= 0,3-1,7								11,0-11,1

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# Testoil-ISO 4113

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever	Control rod travel		Degree of deflection of control lever	Control rod travel		Degree of deflection of control lever	Control rod travel		Torque-control travel	
	rev/min	mm		rev/min	mm		rev/min	mm	rev/min	mm
1	2	3	4	5	6	7	8	9	10	11

### 325 - 1150 A 8 B 694 D

ca. 54	1150	12,0	without auxiliary spring				ca. 21	325	5,0	1150	0
	1190	7,8					200	19 - 21	450	0,9-1,1	
	1210	5,0	with auxiliary spring				325	5,4-5,6			
	1130	8,0 - 9,6					400	1,6-3,5			
	1200	5,0 - 7,5					500	0 - 1			
	1210	0,3 - 1,0									

### 325 - 1150 A 8 B 492 DL, 493 DL, 494 DL, 657 DL

ca. 54	1150	12,0	without auxiliary spring				ca. 21	325	5,0	1150	0
	1180	9,0					200	19-21	900	0,4-0,6	
	1200	6,4	with auxiliary spring				325	5,4-5,6			
	1160	8,0-9,5					400	1,6-3,4			
	1280	3,4-5,0					500	0 - 1			
	1300	0,3-1									

### 325 - 1150 A 8 B 494 DL with pump 1326

loose	800	0,3 - 1,0					ca. 18	325	5,0	1130	10,5
	X =	4,0						100	min. 19	930	11,0-11,2
ca. 52	1170	1180 = 9,5						325	5,4-5,6		
	1200	1230 = 4,0						385-445 = 2,0			
	1370	= 0,3-1,7									

### 325 - 1150 A 8 B 494 DL with pump 1324

loose	800	0,3 - 1,0					ca. 21	325	5,0	1150	10,6-10,7
								100	min. 19	900	11,0-11,2
ca. 54	1190	1200 = 9,6						325	5,4-5,6		
	1220	1250 = 4,0						390-450 = 2,0			
	1350	= 0,3 - 1,7						500	0 - 1		

### 325 - 1150 A 8 B 494 DL with pump 1300

loose	800	0,3 - 1,0					ca. 22	325	5,0	1150	10,5-10,6
	X =	5,5						100	min. 19	915	10,9-11,1
ca. 57	1190	1200 = 9,5						325	5,4-5,6		
	1230	1260 = 4,0						395-455 = 2,0			
	1400	= 0,3 - 1,7									

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Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	rev/min	mm
1	2	3	4	5	6	7	8	9	10	11

325-1150 A 8 B 657 DL

loose	800	0,3 - 1,0				ca. 17	325	5,0	1150	10,6-10,7
	x = 4,25						100	min. 19		930
ca. 52	1180	1190 = 9,6					325	5,4 - 5,5	500	11,6-11,7
	1210	1240 = 4,0					385-445 = 2,0			
	1380	= 0,3-1,7					500	0 - 1		

325-1150 A 8 B 491 DL

ca. 53	1150	10,0	without auxiliary spring			ca. 21	325	5,5	1150	0
	1180	7,0					200	19 - 21		800
1200	5,0	325				5,2-5,8	500	0,6-0,8		
1160	8,5-9,5	with auxiliary spring			400	1,6-3,4				
1200	4,2-5,8				500	0 - 1				
1300	0,3- 1,0									

325-1150 A 8 B 540 DL, 578 DL

ca. 54	1150	12,0	without auxiliary spring			ca. 21	325	5,0	1130	0
	1180	9,0					200	19 - 21		900
1210	5,2	325				5,4-5,6	500	1,0-1,2		
1160	8,5-9,5	with auxiliary spring			500	1,4-3,4				
1200	4,2-5,8				660	0 - 1				
1300	0,3-1,5									

325-1150 A 8 B 601 DL

ca. 56	1150	16,0	without auxiliary spring			ca. 21	325	5,5	1130	0
	1200	11,4					200	19 - 21		900
1250	5,7	325				5,2-5,8	500	0,6-0,8		
1220	7,7-12,4	with auxiliary spring			400	1,4-3,3				
1260	3,0-6,4				500	0 -1,5				
1360	0,3- 1,0									

325-1150 A 8 B 29E DL

loose	800	0,3 - 1,0				ca. 21	325	5,0	1150	10,5-10,6
	x = 4,75						100	min.19,0		850
ca. 55	1190	1200 = 9,5					325	5,4-5,6	500	11,2-11,3
	1225	1255 = 4,0					500	560 = 2,0		
	1350	= 0,3-1,7								

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Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	rev/min	mm
1	2	3	4	5	6	7	8	9	10	11

325-1150 A 8 B 275 DL

loose	800	0,3-1,0				ca. 20	325	5,0	1150	10,6-10,7
	x =	4,0					100	min. 19		800
ca. 55	1190	1200=9,6					325	5,4-5,6	600	11,9-12,0
	1220	1250=4,0					425	485 = 2,0		
	1350	0,3-1,7								

325-1150 A 8 E 604 DL

ca. 56	1150	16,0	without auxiliary spring			ca. 21	325	5,0	1130	0	
	1180	13,4					200	19 - 21		800	0,5-0,7
	1250	5,6					325	5,4 - 5,6		500	0,6-0,8
	1220	7,5-10,2	with auxiliary spring				400	1,5 - 3,2	500	0,6-0,8	
	1280	1,6-4,4					500	0 - 1			
	1360	0,3-1,5									

375-1150 A 8 B 590 DL

ca. 53	1150	10,0	without auxiliary spring			ca. 20	375	5,0	1130	0	
	1170	7,8					250	19 - 21			
	1200	4,5					375	5,4-5,6		800	0,4-0,6
	1170	7,5-8,6	with auxiliary spring				430	2,0-3,8	500	0,9-1,1	
	1230	1,5-3,4					520	0 - 1			
	1300	0,3- 1,0									

325-1075 A 8 B 492 DL, 657 DL

loose	800	0,3-1,0				ca. 21	325	5,0	1075	11,0-11,1
	x =	4,5					100	min. 19		900
ca. 52	1115	1125=10,0					325	5,4-5,6	500	12,0-12,1
	1160	1190= 4,0					380	440=2,0		
	1300	0,3 - 1,7								

325-1050 A 8 B 532 DL

ca. 49	1050	10,0	without auxiliary spring			ca. 21	325	5,0	1030	0	
	1080	6,8					200	19 - 21		800	0
	1100	4,5					325	5,4-5,6		700	0,2-0,4
	1060	8,5-9,5	with auxiliary spring				400	1,6-3,4	500	0,6-0,8	
	1120	2,5-4,1					500	0 - 1			
	1200	0,3-1,0									

Testoil-ISO 4113

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Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	Torque	control travel mm
1	2	3	4	5	6	7	8	9	10	11

325-1050 A 8 B 577 DL

ca. 51	1050	16,0	without auxiliary spring			ca. 21	325	5,0	1030	0	
	1100	11,0					200	19 - 21	800	0	
	1150	5,0					325	5,4-5,6	700	0,1-0,2	
	1070	14,0-14,8					400	1,6-3,4	500	0,6-0,8	
	1130	6,0-9,4					with auxiliary spring	500	0 - 1		
	1250	0,3-1,0									

325-1000 A 8 B 588 DL

loose	800	0,3-1,0				ca. 16	325	5,0	980	10,8-10,9
	x = 4,25						100	min. 19	800	11,1-11,4
ca. 41	1020-1030	= 9,8					325	5,4-5,6	500	11,8-11,9
	1060-1090	= 4,0					380-440	= 2,0		
	1200	= 0,3-1,7								

325-1000 A 8 B 598 DL

ca. 48	1000	16,0	without auxiliary spring			ca. 19	325	5,5	980	0			
	1050	11,1					200	19 - 21					
	1100	5,0					325	5,2-5,8			800	0,3-0,5	
	1060	9,0-11,0					400	1,2-4,0			450	0,9-1,1	
	1120	2,2-4,6					with auxiliary spring	480			0 - 1		
	1220	0,3-1,5											

375-1000 A 8 B 606 DL

loose	800	0,3-1,0				ca. 20	375	5,0	1000	11,2-11,3
	x = 4,25						100	min. 19	750	11,7-12,0
ca. 47	1040-1050	= 10,2					375	5,4-5,6	500	12,2-12,3
	1075-1105	= 4,0					420-480	= 2,0		
	1200	= 0,3-1,7								

325-1000 A 8 B 733 DL

loose	800	0,3-1,0				ca. 19	325	5,0	1000	0
	x = 4,25						100	min. 19	800	0,2-0,3
ca. 48	1060-1080	= 9,2					325	5,4-5,6	500	1,0-1,1
	1090-1130	= 4,0					380-430	= 2,0		
	1160	= 0,3-1,7					520	0 - 1		

Testoil-ISO 4113

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel Torque-control travel	
Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	rev/min	mm
1	2	3	4	5	6	7	8	9	10	11

325-1000 A 8 B 1032 DL

loose	800	0,3-1,0				ca. 19	325	5,0	1000	10,8-10,9
	x = 4,25						100	min. 19		750
ca. 47	1040	1050=9,8					325	5,4-5,6	500	11,5-11,6
	1075	1105=4,0					480-580=2,0			
	1200	0,3-1,7								

325-900 A 7 B 494 DL

ca. 59	900	16,0	without auxiliary spring			ca. 26	325	5,5	-	-
	950	10,0					100	19 - 21		
	1000	2,4					325	5,2-5,8		
	900	ca. 11,0	with auxiliary spring				360	2,6-4,0		
	960	7,0-9,6					450	0 - 1,5		
	1050	0,3-1,5								

325-900 A 7 B 602 DL

loose	800	0,3-1,0				ca. 26	325	5,0		
	x = 5,5						100	min. 19		
ca. 58	920	930=9,2					325	5,4-5,6		
	945	975=4,0					360	420=2,0		
	1100	0,3-1,7								

325-900 A 7 B 634 DL

ca. 57	900	12,0	without auxiliary spring			ca. 26	325	5,0		
	920	8,4					100	min. 19		
	940	5,5					325	5,4-5,6		
	920	8,0-9,5	with auxiliary spring				360	3,0-4,3		
	950	2,0-4,0					450	0 - 1,5		
	1020	0,3-1,5								

325-900 A 7 B 2011 D

loose	800	0,3-1,0				ca. 26	325	5,5	900	0
	x = 5,5						100	min. 19	600	0,6-0,8
ca. 60	940	950=10,6					325	6,0-6,1	400	0,9-1,1
	965	995= 4,0					430-500 = 2,0			
	1100	0,3-1,7					600	0 - 1		

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Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	Torque-control travel rev/min	mm
1	2	3	4	5	6	7	8	9	10	11

325-750 A 7 B 633 DL

ca. 45	750	16,0	without auxiliary spring			ca. 21	325	5,5	730	0		
	775	11,4					180	19 - 21				
	800	6,0					325	5,2-5,8			400	0,5-0,7
	760	9,2-10,4					420	2,0-3,6				
	850	1,5-3,3					580	0 - 1				
	920	0,3- 1										

EP/RS 275/1400 A 0 B 496 DL

* VHca.72	1400	9,8				* VH max.	285	5,9	1380	0
	1400	9,8-10,6					150	20 - 21		
* FH max.	1420	7,6-9,2				* FHca.40	285	5,6-6,2	900	0,4-0,6
	1450	4,6-6,4					400	3,2-4,7		
	1500	2,0-3,8					600	0 - 1		
	1600	0,3- 1								

EP/RS 325/1400 A 0 B 620 DL

* VHca.73	1400	15,8-16,4	-	-	-	* VH max.	325	8,3	1380	0
	1450	12,9-14,0					260	9,1-10,0		
* FH max.	1500	9,9-11,5				* FHca31	300	8,4-9,1	1000	0,8-1,0
	1550	6,6-8,5					350	7,4-7,9		
	1600	2,9-5,2					450	4,1-5,6		
	1660	0,3-1,0					550	3,5-4,0		
							800	3,5-4,0		
							1500	0		

EP/RS 325/1650 A 0 B 2087 L

* VHca.49	800	0,3-1,0				* VH max.	325	6,0		
* FH max						* FHca18	100	min.10,8		
	1690-1700	=8,9					450-490	=2,0		
	1740-1770	=4,0					600	1,8		
	1900	= 0,3-1,7								

VH=Control lever

\* FH=Accelerato lever

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Testoil-ISO 4113



EP/RS 325/1400 AO B620DL is an idle maximum speed governor of a new kind. Compared with the EP/RSV governor it has the following characteristics:

- a) The speed control lever is fixed with blocking screws.
- b) The shutoff arm serves as driving lever (delivery lever).
- c) A steel bolt pressed into the governor housing serves as the max. speed stop of the driving lever.
- d) The lower idle speed is governed by a spring in the torque-control capsule.
- e) There are no idle auxiliary spring or stop/idle-stop screw.

The testing and adjustment of the governor correspond partly to that of the EP/RSV..- governor (see Test Instructions VDT-WPP 001/4-1st. suppl.). Those work steps which are different are listed below.

Preliminary mechanical test see Test Instructions, section 1.

To 1.a): The stop screw must no longer be set.

To 1.b): When testing the full control-rod travel, the driving lever should be brought into the full load position.

#### Adjusting and testing

The clamping device 1 688 040 122 - EFEP 56 C/4 should be used for mounting the adjusting device 0 681 440 006 - EFEP 56 C.

1. Basic position of the governor spring and testing of the control-rod travel at upper rated speed see Test Instructions, step 1.  
Test specifications see section B, columns 1-3.

Fix the resulting final control-lever position with the stop screw.

Pull the drive lever with spring at max. speed stop if necessary.

Additional instructions: The difference in the control-rod travel between rising and falling speed must not exceed 1 mm..

When driving lever is in rated speed position press the stop button. The control rod must also reach stop position.

2. Adjusting the full-load delivery: see Test Instructions, step 2.  
Drive lever in position - full load.  
Test specifications see section C, columns 1-2.
3. Adjusting the torque control: see Test Instructions, steps 3 and 3a.  
Drive lever in position - full load.  
Test specifications see section B, columns 10-11 and section C, columns 4-5.
4. Check the idle-speed control (replaces step 4 of the test instructions).  
Adjusting device EFEP 56.. should be removed from the control lever and adjust according to drive lever. (Please note: drive lever horizontal position = 40°).  
Test specifications see section B, columns 7-9.

Drive the pump at the speed shown in the frame and adjust the drive lever so that the relevant control-rod travel can be reached. In this way the drive lever position should correspond to the value given.

Clamp the drive lever firmly.

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Check the control-rod travel lengths at the speeds prescribed. If necessary, change the spring retainer and repeat the test from 3. The difference between rising and falling speeds must not exceed 0.7 mm..

5. Step 5 of the Test Instructions is no longer required.
6. Adjusting the breakaway: see Test Instructions, step 6. Test specifications see section C, column 3.

When adjustment has successfully been completed, block the control lever with both stop screws.

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A12

A12

### B. Governor Settings

2

Checking of slider PRG check		Full-load speed regulation				Idle speed regulation				Torque control	
①		Setting point		Test specifications		Setting point		Test specifications		③	
rev/min	Control rod travel mm	rev/min	Control rod travel mm	Control rod travel mm	rev/min	rev/min	Control rod travel mm	Control rod travel mm	rev/min	Control rod travel mm	
1	2	3	4	5	6	7	8	9	10	11	12
RQ	275/1400 AB	694 D	798 D	8 D							
1300	13,7-14,3	1300	14,0	1420	13,6-14,0	640	0	100	6,2-8,1	650	15,8-16,0
				1460	9,6-13,0			250	4,8-6,8	900	14,9-15,3
				1530	0 - 9			350	3,0-5,2	1100	14,0-14,3
				1620	0			540	0		

Torque-control travel on flyweight assembly dimension a = **0,65** mm      Speed regulation At **1** mm less control rod travel

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery on governor control lever Test oil temp 40°C (104°F)		Control rod stop	Fuel delivery characteristics		Starting fuel delivery Idle speed	
②		③a	③b		⑥	
rev/min	cm <sup>3</sup> /-1000 strokes	rev/min	rev/min	cm <sup>3</sup> /-1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes / mm
1	2	3	4	5	6	7

Checking values in brackets

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### B. Governor Settings

Checking of slider PRG check		Full-load speed regulation				Idle speed regulation				Torque control	
①		Setting point		Test specifications		Setting point		Test specifications		③	
rev/min	Control rod travel mm	rev/min	Control rod travel mm	Control rod travel mm	rev/min	rev/min	Control rod travel mm	Control rod travel mm	rev/min	Control rod travel mm	
1	2	3	4	5	6	7	8	9	10	11	12

Torque-control travel on flyweight assembly dimension a = **1** mm less control rod travel      Speed regulation At **1** mm less control rod travel

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery on governor control lever Test oil temp 40°C (104°F)		Control rod stop	Fuel delivery characteristics		Starting fuel delivery Idle speed	
②		③a	③b		⑥	
rev/min	cm <sup>3</sup> /-1000 strokes	rev/min	rev/min	cm <sup>3</sup> /-1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes / mm
1	2	3	4	5	6	7

Checking values in brackets

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	rev/min	mm
1	2	3	4	5	6	7	8	9	10	11

RQV 275-1400 AB 757 D, 799 D

ca. 68	1400	15,0-18,2	-	-	-	ca. 12	240	6,0-8,0	1400	0,9 mm
	1480	7,8-13,0					350	2,8-4,8	0	
	1560	0 - 7,2					500	2,4-3,8	1100	0,4-0,6
	1660	0					700	0,8-2,2	600	0,8-1,0
							890	0		

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### C. Settings for Fuel Injection Pump with Fitted Governor

<b>(2b) Full-load stop</b> Test oil temp 40°C (104°F)		<b>(3) Rotational-speed limit</b> Note changed to ) rev/min	<b>(3a) Fuel delivery characteristics</b>		Output and speed - ..PS / ..U/min.	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5		
	F 2 L 912 -	PES 2 A 80 D	310/3	RS 1322	(F- or B-power)	
1400	60,0-61,0	1440	700	54,5-56,5	28 kW / n = 2800	
1250	50,5-52,5	1270	800	44,0-47,0	23 kW / n = 2500	
1250	45,5-47,5	1270	800	38,0-41,0	21 kW / n = 2500	
1250	36,5-38,5	1270	800	31,0-34,0	18 kW / n = 2500	
1200	59,5-61,5	1220	800	56,5-59,5	26 kW / n = 2400	
1150	45,5-47,5	1170	800	38,5-47,5	20 kW / n = 2300	
1075	48,0-50,0	1095	800	44,0-47,0	21 kW / n = 2150	
1000	58,5-60,5	1020	800	57,5-60,5	23 kW / n = 2000	
950	57,5-59,5	970	800	56,5-59,5	22 kW / n = 1900	
900	57,5-59,5	920	-	-	21 kW / n = 1800	
900	47,0-49,0	920	800	47,0-50,0	19 kW / n = 1800	
900	55,0-56,0	940	-	-	18,5 kW / n = 1800	
900	38,5-40,5	920	800	37,0-40,0	16,5 kW / n = 1800	
800	31,5-33,5	820	-	-	13 kW / n = 1600	
750	40,5-42,5	760	-	-	15,0 kW / n = 1500	
750	60,5-62,5	760	-	-	18,0 kW / n = 1500	
750	35,5-37,5	760	-	-	14,0 kW / n = 1500	
ICXN-power output (10% above rated output)						
900	63,5-65,5	910	-	-	A 20,0 (+10%) / n = 1800	
900	51,0-53,0	910	-	-	A 18,0 (+10%) / n = 1800	
750	59,5-61,5	760	-	-	A 16,5 (+10%) / n = 1500	
15N-power output (5% above rated output)						
900	63,0-65,0	910	-	-	A 21,0 (+ 5%) / n = 1800	

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### C. Settings for Fuel Injection Pump with Fitted Governor

<b>(2b)</b> Full-load stop Test oil temp 40°C (104°F)		<b>(6)</b> Rotational speed limit Note changed to 1 rev/min	<b>(3a)</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min 1	cm <sup>3</sup> /1000 strokes 2	3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	
F 3 L 912 - PES 3A 80		D 410/3 RS 1183, 1324		(F- or B-power output)	
1500	57,5-59,5	1520	800	41,5-44,5	38,3 kW (52 PS) / n = 3000
1500	53,5-55,5	1520	800	37,5-40,5	34,6 kW (47 PS) / n = 3000
1400	65,5-67,5	1420	800	51,5-54,5	42,7 kW (58 PS) / n = 2800
1400	60,5-62,5	1420	800	48,5-51,5	40,5 kW (55 PS) / n = 2800
1325	63,5-65,5	1340	800	50,5-53,5	41,2 kW (56 PS) / n = 2650
1325	59,0-61,0	1340	800	47,5-50,5	39,0 kW (53 PS) / n = 2650
1300	55,5-57,5	1320	800	43,5-46,5	36,8 kW (50 PS) / n = 2600
1250	62,0-64,0	1270	800	51,5-54,5	39,7 kW (54 PS) / n = 2500
1250	59,5-61,5	1270	800	51,5-54,5	39,0 kW / n = 2500
1250	58,5-60,5	1270	800	50,5-53,5	38,0 kW / n = 2500
1250	56,5-58,5	1270	800	48,0-51,0	37,0 kW / n = 2500
1250	49,5-51,5	1270	800	40,5-43,5	33,0 kW / n = 2500
1225	56,0-58,0	1240	800	46,5-49,5	36,8 kW (50 PS) / n = 2450
1200	60,5-62,5	1220	800	51,5-54,5	39,0 kW (53 PS) / n = 2400
1200	58,0-60,0	1220	800	48,5-51,5	37,5 kW (51 PS) / n = 2400
1200	54,5-56,5	1220	800	47,5-50,5	36,0 kW / n = 2400
1175	59,5-60,5	1195	775	55,5-56,5	38,0 kW / n = 2350*
1175	50,5-51,5	1195	775	48,5-49,5	33,0 kW / n = 2350*
1150	59,0-61,0	1170	775	55,0-58,0	37,5 kW (51 PS) / n = 2300
1150	57,5-58,5	1170	775	56,0-57,0	37,0 kW / n = 2300*
1150	56,0-58,0	1170	800	52,0-55,0	36,0 kW / n = 2300
1150	53,0-55,0	1170	775	48,5-51,5	35,0 kW / n = 2300
1150	48,5-50,5	1170	800	44,0-47,0	32,0 kW / n = 2300
1100	44,5-46,5	1170	800	38,5-41,5	29,0 kW / n = 2300
1100	55,5-57,5	1120	775	52,5-55,5	35,3 kW (48 PS) / n = 2200
1095	50,5-52,5	1115	775	53,5-56,5	33,0 kW / n = 2190
1075	57,5-59,5	1090	775	54,5-57,5	36,0 kW (49 PS) / n = 2150
1075	54,5-56,5	1090	775	51,5-54,5	34,6 kW (47 PS) / n = 2150
1075	47,0-49,0	1095	800	44,0-47,0	31,0 kW / n = 2150
1075	41,5-42,5	1090	775	37,5-39,5	25,8 kW (35 PS) / n = 2150
1050	45,0-47,0	1070	800	43,5-46,5	30,0 kW / n = 2100
1000	55,5-57,5	1015	775	53,5-56,5	33,9 kW (46 PS) / n = 2000
1000	53,0-54,0	1020	775	58,0-59,0	33,0 kW / n = 2000*
1000	49,5-51,5	1015	775	47,5-50,5	31,3 kW (42,5PS) / n = 2000
1000	46,5-48,5	1020	800	45,0-49,0	30,0 kW / n = 2000
1000	44,5-46,5	1020	800	43,5-46,5	29,0 kW / n = 2000
1000	43,5-44,5	1020	775	46,5-47,5	28,0 kW / n = 2000*
975	36,5-38,5	995	800	33,0-36,0	22,0 kW / n = 1950
900	54,0-56,0	910	775	53,0-56,0	30,9 kW (42 PS) / n = 1800

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### C. Settings for Fuel Injection Pump with Fitted Governor

(2b) Full-load stop Test oil temp. 40°C (104°F)		(6) Rotational speed limit Note changed to ) rev/min	(3a) Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	
F 3 L 912	- PES 3 A 80	D 410/3 RS 1183,	1324		(F- or B-power output) (cont.)
900	50,0-52,0	910	775	50,0-53,0	29,4 kW (40 PS) / n = 1800
875	47,0-49,0	885	775	46,0-49,0	27,6 kW (37,5PS) / n = 1750
850	43,5-45,5	860	775	43,0-46,0	25,4 kW (34,5PS) / n = 1700
800	43,0-45,0	810	-	-	23,9 kW (32,5PS) / n = 1600
750	54,0-56,0	760	-	-	26,5 kW (36 PS) / n = 1500
750	50,0-52,0	760	-	-	25,0 kW (34 PS) / n = 1500
600	42,0-44,0	620	-	-	18,0 kW / n = 1200

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### C. Settings for Fuel Injection Pump with Fitted Governor

<b>(2b)</b> Full-load stop Test oil temp 40°C (104°F)		<b>(6)</b> Rotational speed limit Note changed to ) rev/min	<b>(3a)</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min 1	cm <sup>3</sup> 1000 strokes 2	3	rev/min 4	cm <sup>3</sup> 1000 strokes 5	
F 3 L 912 - PES 3 A 80 D 410/3 RS1183,1324					Power output ICXN (10% above rated output)
1500	54,5-56,5	1520	-	-	32,4kW(44 PS)(+10%) / n = 3000
1485	58,5-61,5	1495	-	-	35,0kW (+10%) / n = 2970
1400	55,0-57,0	1420	-	-	33,9kW(46 PS)(+10%) / n = 2800
1325	57,0-59,0	1340	-	-	34,6kW(47 PS)(+10%) / n = 2650
1250	54,5-56,5	1270	-	-	33,5kW(45,5PS)(+10%) / n = 2500
1200	41, -43,5	1210	-	-	22,0kW (+10%) / n = 2400
1150	59,0-61,0	1170	-	-	34,6kW(47 PS)(+10%) / n = 2300
1150	55,0-57,0	1170	-	-	32,4kW(44 PS)(+10%) / n = 2300
1100	57,5-59,5	1110	-	-	33,0kW (+10%) / n = 2200
1100	52,5-54,5	1120	-	-	30,9kW(42 PS)(+10%) / n = 2200
1075	56,5-58,5	1090	-	-	32,4kW(44 PS)(+10%) / n = 2150
1075	53,0-55,0	1090	-	-	31,3kW(42,5PS)(+10%) / n = 2150
1000	53,5-55,5	1015	-	-	30,2kW(41 PS)(+10%) / n = 2000
1000	47,0-49,0	1015	-	-	27,2kW(37 PS)(+10%) / n = 2000
900	57,0-59,0	910	-	-	29 kW (+10%) / n = 1800
900	53,0-55,0	910	-	-	28 kW(38 PS)(+10%) / n = 1800
900	50,0-52,0	910	-	-	26,9kW(36,5PS)(+10%) / n = 1800
900	43,5-45,5	910	-	-	23,0kW (+10%) / n = 1800
750	58,5-60,5	760	-	-	25,0kW (+10%) / n = 1500
750	53,5-55,5	760	-	-	24,0kW (+10%) / n = 1500
750	51,5-53,5	760	-	-	23,6kW(32 PS)(+10%) / n = 1500
750	48,5-50,5	760	-	-	22,4kW(30,5PS)(+10%) / n = 1500
750	47,0-49,0	760	-	-	22,0kW (+10%) / n = 1500
750	42,5-44,5	760	-	-	20,0kW (+10%) / n = 1500
750	35,0-37,0	760	-	-	16,8kW (+10%) / n = 1500
Power output 15N (5% above rated output)					
900	59,5-61,5	910	-	-	31,0kW (+5%) / n = 1800
900	52,0-54,0	910	-	-	29 kW (+5%) / n = 1800

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### C. Settings for Fuel Injection Pump with Fitted Governor

<b>(2b)</b> Full-load stop Test oil temp 40°C (104°F)		<b>(3)</b> Rotational speed limit Note changed to 1 rev/min		<b>(3a)</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5			
<b>F 3 L 912 - PES 3 A 75 D 410/3 RS 1183,1185 (F- or B-power output)</b>							
1500	58,5-60,5	1520	800	45,0-48,0	38,3 kW (52 PS)	/	n = 3000
1500	54,5-56,5	1520	800	41,5-44,5	34,6 kW (47 PS)	/	n = 3000
1400	65,0-67,0	1420	800	53,0-56,0	42,7 kW (58 PS)	/	n = 2800
1400	60,5-62,5	1420	800	50,0-53,0	40,5 kW (55 PS)	/	n = 2800
1325	61,0-63,0	1340	800	52,0-55,0	41,2 kW (56 PS)	/	n = 2650
1325	58,0-60,0	1340	800	49,5-52,5	39,0 kW (53 PS)	/	n = 2650
1300	55,0-57,0	1320	800	46,5-49,5	36,8 kW (50 PS)	/	n = 2600
1250	59,0-61,0	1270	800	53,5-56,5	39,7 kW (54 PS)	/	n = 2500
1250	56,5-58,5	1270	800	50,5-53,5	38,2 kW (52 PS)	/	n = 2500
1225	54,5-56,5	1240	800	48,5-51,5	36,8 kW (50 PS)	/	n = 2450
1200	58,0-60,0	1220	800	53,5-56,5	39,0 kW (53 PS)	/	n = 2400
1200	56,0-58,0	1220	800	51,0-54,0	37,5 kW (51 PS)	/	n = 2400
1150	56,5-58,5	1170	775	55,5-58,5	37,5 kW (51 PS)	/	n = 2300
1150	51,5-53,5	1170	775	51,0-54,0	34,6 kW (47 PS)	/	n = 2300
1100	53,5-55,5	1120	775	54,0-57,0	35,3 kW (48 PS)	/	n = 2200
1075	55,5-57,5	1090	775	55,5-58,5	36,0 kW (49 PS)	/	n = 2150
1075	53,0-55,0	1090	775	53,0-56,0	34,6 kW (47 PS)	/	n = 2150
1000	53,5-55,5	1015	775	54,0-57,0	33,9 kW (46 PS)	/	n = 2000
1000	49,5-51,5	1015	775	49,0-52,0	31,3 kW (42,5PS)	/	n = 2000
1000	46,0-48,0	1015	-	-	27,2 kW (37 PS)	/	n = 2000
900	54,0-56,0	910	775	54,5-57,5	30,9 kW (42 PS)	/	n = 1800
900	51,0-53,0	910	775	52,0-55,0	29,4 kW (40 PS)	/	n = 1800
875	49,0-51,0	885	775	49,0-52,0	27,6 kW (37,5PS)	/	n = 1750
850	46,5-48,5	885	775	46,0-49,0	25,4 kW (34,5PS)	/	n = 1700
800	46,0-48,0	810	-	-	23,9 kW (32,5PS)	/	n = 1600
750	46,0-48,0	760	-	-	26,5 kW (36 PS)	/	n = 1500
750	52,5-54,5	760	-	-	25,0 kW (34 PS)	/	n = 1500

ICXN-power output (10% above rated output)

1500	54,5-56,5	1520	-	-	32,4 kW (44 PS)	/	n = 3000
1400	55,0-57,0	1420	-	-	33,9 kW (46 PS)	/	n = 2800
1325	56,0-58,0	1340	-	-	34,6 kW (47 PS)	/	n = 2650
1250	53,0-55,0	1270	-	-	33,5 kW (45,5PS)	/	n = 2500
1150	56,5-58,5	1170	-	-	34,6 kW (47 PS)	/	n = 2300
1150	52,5-54,5	1170	-	-	32,4 kW (44 PS)	/	n = 2300
1100	51,0-53,0	1120	-	-	30,9 kW (42 PS)	/	n = 2200
1075	54,0-56,0	1090	-	-	32,4 kW (44 PS)	/	n = 2150
1075	51,0-53,0	1090	-	-	31,3 kW (42,5PS)	/	n = 2150
1000	53,0-55,0	1015	-	-	30,2 kW (41 PS)	/	n = 2000
1000	45,5-47,5	1015	-	-	27,2 kW (37 PS)	/	n = 2000
900	53,0-55,0	910	-	-	28,0 kW (38 PS)	/	n = 1800
900	51,0-53,0	910	-	-	26,9 kW (36,5PS)	/	n = 1800
900	47,5-49,5	910	-	-	25 kW	/	n = 1800
750	54,0-56,0	760	-	-	23,6 kW (32 PS)	/	n = 1500
750	51,0-53,0	760	-	-	22,4 kW (30,5PS)	/	n = 1500

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### C. Settings for Fuel Injection Pump with Fitted Governor

<b>2b</b> Full-load stop Test oil temp: 40°C (104°F) rev/min   cm <sup>3</sup> /1000 strokes 1   2		<b>3</b> Rotational-speed limit Note changed to .) rev/min 3		<b>3b</b> Fuel delivery characteristics rev/min   cm <sup>3</sup> /1000 strokes 4   5		Output and speed - ..PS / ..U/min.
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F 4 L 912 - PES 4 A 80 D 410/3 RS 1183, 1300. 2346 (F- or B-power output)

1400	63,5-65,5	1420	800	59,5-62,5	58,9 kW (80 PS) / n = 2800
1400	61,0-63,0	1420	800	58,5-61,5	57,0 kW / n = 2800
1350	52,5-54,5	1370	-	-	50,4 kW / n = 2700
1325	62,5-64,5	1340	800	56,5-59,5	56,7 kW (77 PS) / n = 2650
1325	58,0-60,0	1345	800	54,5-57,5	54,0 kW / n = 2650
1325	56,5-58,5	1345	800	51,5-54,5	52,0 kW / n = 2650
1250	61,0-63,0	1270	800	56,5-59,5	54,5 kW (74 PS) / n = 2500
1250	60,5-62,5	1270	800	57,0-60,0	54,0 kW / n = 2500
1250	57,0-59,0	1270	800	54,0-57,0	51,5 kW (70 PS) / n = 2500
1200	60,5-62,5	1220	800	56,5-59,5	53,0 kW (72 PS) / n = 2400
1200	58,0-60,0	1220	-	-	52,0 kW / n = 2400
1200	56,0-58,0	1220	800	52,5-55,5	50,0 kW (68 PS) / n = 2400
1150	59,0-61,0	1170	775	59,5-62,5	51,5 kW (70 PS) / n = 2300
1150	59,5-60,5	1170	800	60,5-61,5	51,0 kW / n = 2300*
1150	56,5-58,5	1170	775	56,5-59,5	49,3 kW (67 PS) / n = 2300
1150	57,0-59,0	1170	800	55,5-58,5	49,0 kW / n = 2300
1150	57,0-58,0	1170	800	54,5-57,5	48,0 kW / n = 2300
1150	51,5-53,5	1170	775	51,5-54,5	45,6 kW (62 PS) / n = 2300
1150	48,0-50,0	1170	-	-	43,0 kW / n = 2300
1100	59,0-61,0	1120	775	58,5-61,5	50,0 kW (68 PS) / n = 2200
1100	51,0-53,0	1120	775	51,5-54,5	44,1 kW (60 PS) / n = 2200
1075	59,5-61,5	1090	775	58,5-61,5	49,3 kW (67 PS) / n = 2150
1075	57,0-58,0	1095	775	62,0-63,0	48,0 kW / n = 2150*
1075	54,0-56,0	1090	775	54,0-57,0	46,3 kW (63 PS) / n = 2150
1075	48,0-50,0	1095	800	49,0-52,0	42,0 kW / n = 2150
1065	54,0-55,0	1085	800	60,0-61,0	46,0 kW / n = 2130*
1050	54,0-56,0	1065	775	54,0-57,0	45,6 kW (62 PS) / n = 2100
1025	49,0-51,0	1040	775	49,5-52,5	41,2 kW (56 PS) / n = 2050

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**Testoil-ISO 4113**

# C. Settings for Fuel Injection Pump with Fitted Governor

<b>(2b) Full-load stop</b> Test oil temp 40°C (104°F) rev/min   cm <sup>3</sup> /1000 strokes 1   2		<b>(3) Rotations: speed limit</b> Note changed to ) rev/min   3		<b>(3a) Fuel delivery characteristics</b> rev/min   cm <sup>3</sup> /1000 strokes 4   5		Output and speed - ..PS / ..U/min.
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F 4 L 912 - PES 4 A 80 D 410/3 RS 1183,1300,2346 Power output-ICXN (10% above rated output)

1150	58,5-60,5	1170	-	-	46,3 kW (63 PS) ;/ n = 2300
1150	52,0-54,0	1170	-	-	42,7 kW (58 PS) / n = 2300
1100	52,0-54,0	1120	-	-	41,2 kW (56 PS) / n = 2200
1100	48,5-50,5	1120	-	-	39,0 kW (53 PS) / n = 2200
1075	57,0-59,0	1090	-	-	44,1 kW (60 PS) / n = 2150
1075	48,5-50,5	1090	-	-	38,5 kW (52,5PS) / n = 2150
1050	45,0-47,0	1065	-	-	35,3 kW (48 PS) / n = 2100
900	49,0-51,0	910	-	-	36,0 kW / n = 1800
900	62,0-64,0	910	-	-	40,0 kW / n = 1800
900	52,0-54,0	910	-	-	36,0 kW / n = 1800
900	42,5-44,5	910	-	-	31,0 kW / n = 1800
750	61,0-63,0	760	-	-	34,0 kW / n = 1500
750	57,0-59,0	760	-	-	32,0 kW / n = 1500
750	51,0-53,0	760	-	-	29,0 kW / n = 1500

Power output-15N (5% above rated output)

900	63,5-65,5	910	-	-	43,0kW / n = 1800
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**Testoil-ISO 4113**

# C. Settings for Fuel Injection Pump with Fitted Governor

<b>2b</b> Full-load stop Test oil temp 40°C (104°F)		<b>3</b> Rotational speed limit Note changed to 1 rev/min	<b>3a</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	
1	2	3	4	5	

F 4 L 912 - PES 4 A 75 D 410/3 RS 1183,1255 (F-or B- power output)

1500	56,0-58,0	1520	800	43,0-46,0	51,5 kW (70 PS)	/	n = 3000
1500	50,5-52,5	1520	800	37,0-40,0	46,4 kW (63 PS)	/	n = 3000
1500	48,5-50,5	1520	800	35,0-38,0	44,2 kW (60 PS)	/	n = 3000
1400	54,5-56,5	1140	800	49,5-52,5	53,7 kW (73 PS)	/	n = 2800
1325	53,0-55,0	1345	-	-	52,0 kW	/	n = 2650
1250	52,0-54,0	1270	800	52,5-55,5	51,0 kW	/	n = 2500
1250	42,5-44,5	1270	800	35,5-38,5	38,0 kW	/	n = 2500
1150	54,5-56,5	1170	775	59,0-62,0	51,5 kW (70 PS)	/	n = 2300
1150	51,5-53,5	1170	775	55,0-58,0	49,3 kW (67 PS)	/	n = 2300
1150	48,5-50,5	1170	775	48,0-51,0	45,6 kW (62 PS)	/	n = 2300
1100	54,5-56,5	1120	775	59,0-62,0	50,0 kW (68 PS)	/	n = 2200
1100	46,5-48,5	1120	775	48,0-51,0	44,2 kW (60 PS)	/	n = 2200
1075	55,0-57,0	1090	775	58,0-61,0	49,3 kW (67 PS)	/	n = 2150
1075	49,0-51,0	1090	775	52,0-55,0	46,4 kW (63 PS)	/	n = 2150
1050	49,5-51,5	1065	775	52,0-55,0	45,6 kW (62 PS)	/	n = 2100
1025	44,5-46,5	1040	775	46,0-49,0	41,2 kW (56 PS)	/	n = 2050
1000	48,5-50,5	1020	800	48,5-51,5	47,0 kW	/	n = 2000
1000	55,0-57,0	1015	775	57,0-60,0	46,4 kW (63 PS)	/	n = 2000
950	45,5-47,5	960	775	46,0-49,0	39,7 kW (54 PS)	/	n = 1900
900	56,5-58,5	910	775	57,0-60,0	42,7 kW (58 PS)	/	n = 1800
900	51,5-53,5	910	775	52,0-55,0	40,5 kW (55 PS)	/	n = 1800
875	45,5-47,5	885	775	46,0-49,0	36,8 kW (50 PS)	/	n = 1750
800	46,5-48,5	810	-	-	33,5 kW (45,5 PS)	/	n = 1600
750	56,5-58,5	760	-	-	35,3 kW (48 PS)	/	n = 1500
750	52,0-54,0	760	-	-	33,9 kW (46 PS)	/	n = 1500

ICXN-power output (10% above rated output)

1500	50,5-52,5	1520	-	-	43,4 kW (59 PS)	/	n = 3000
1400	51,0-53,0	1420	-	-	44,9 kW (61 PS)	/	n = 2800
1325	51,5-53,5	1340	-	-	45,6 kW (62 PS)	/	n = 2650
1250	50,0-52,0	1270	-	-	44,2 kW (60 PS)	/	n = 2500
1150	53,0-55,0	1170	-	-	46,4 kW (63 PS)	/	n = 2300
1150	48,5-50,5	1170	-	-	42,7 kW (58 PS)	/	n = 2300
1100	47,0-49,0	1120	-	-	41,2 kW (56 PS)	/	n = 2200
1100	44,0-46,0	1120	-	-	39,0 kW (53 PS)	/	n = 2200
1075	52,0-54,0	1090	-	-	44,2 kW (60 PS)	/	n = 2150
1075	45,0-47,0	1090	-	-	38,4 kW (52,2 PS)	/	n = 2150
1050	40,5-42,5	1065	-	-	35,3 kW (48 PS)	/	n = 2100
1000	52,0-54,0	1015	-	-	41,2 kW (56 PS)	/	n = 2000
1000	47,0-49,0	1015	-	-	39,0 kW (53 PS)	/	n = 2000
900	54,5-56,5	910	-	-	38,3 kW (52 PS)	/	n = 1800
900	49,0-51,0	910	-	-	33,9 kW (49 PS)	/	n = 1800
900	40,5-42,5	910	-	-	31,0 kW	/	n = 1800
875	43,5-46,5	885	-	-	32,4 kW (44 PS)	/	n = 1750
750	53,5-55,5	760	-	-	31,6 kW (43 PS)	/	n = 1500
750	49,0-51,0	760	-	-	30,2 kW (41 PS)	/	n = 1500
750	42,5-44,5	760	-	-	26,5 kW	/	n = 1500
750	36,0-38,0	760	-	-	25,5 kW	/	n = 1500



### C. Settings for Fuel Injection Pump with Fitted Governor

2b Full-load stop Test oil temp 40°C (104°F)		Rotational speed limit Note changed to 1 rev/min	3a Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
1 rev/min	2 cm <sup>3</sup> /1000 strokes	3	4 rev/min	5 cm <sup>3</sup> /1000 strokes	

F 5 L 912 - PES 5 A 80 D 410/3 RS 2327,2347, (F- or B power output)

1500	55,0-57,0	1520	800	40,5-43,5	63,3 kW (86 PS) / n = 3000
1500	50,0-52,0	1520	800	36,5-39,5	57,4 kW (78 PS) / n = 3000
1400	63,5-65,5	1420	800	55,0-58,0	73,6 kW (100PS) / n = 2800
1400	58,0-60,0	1420	800	48,5-51,5	67,7 kW (92 PS) / n = 2800
1325	61,5-63,5	1340	800	54,0-57,0	70,7 kW (96 PS) / n = 2650
1325	55,5-57,5	1340	800	48,0-51,0	64,8 kW (88 PS) / n = 2650
1300	54,5-56,5	1320	800	46,5-49,5	63,3 kW (86 PS) / n = 2600
1250	59,5-61,5	1270	800	54,5-57,5	68,4 kW (93 PS) / n = 2500
1250	56,0-58,0	1270	800	50,5-54,0	64,8 kW (88 PS) / n = 2500
1250	54,5-56,5	1270	800	52,0-55,0	64,0 kW / n = 2500
1200	58,0-60,0	1220	800	56,0-59,0	66,2 kW (90 PS) / n = 2400
1200	52,5-54,5	1220	800	48,0-51,0	61,1 kW (83 PS) / n = 2400
1200	50,0-52,0	1220	800	46,5-49,5	58,5 kW / n = 2400
1175	57,5-59,5	1195	800	58,5-61,5	66,0 kW / n = 2350
1150	57,0-59,0	1170	775	56,0-59,0	64,8 kW (88 PS) / n = 2300
1150	53,0-55,0	1170	775	54,0-57,0	61,0 kW (83 PS) / n = 2300
1150	47,5-49,5	1170	800	48,5-51,5	55,0 kW / n = 2300
1150	46,0-48,0	1170	800	41,5-44,5	53,0 kW / n = 2300
1150	40,0-42,0	1170	800	29,0-32,0	41,0 kW / n = 2300
1100	55,5-57,5	1120	775	56,0-59,0	62,6 kW (85 PS) / n = 2200
1100	45,5-47,5	1120	775	43,5-46,5	51,5 kW (70 PS) / n = 2200
1075	55,5-57,5	1090	775	56,0-59,0	61,8 kW (84 PS) / n = 2150
1075	47,5-49,5	1090	775	47,5-50,5	54,5 kW (74 PS) / n = 2150
1000	55,0-57,0	1015	775	55,5-58,5	58,1 kW (79 PS) / n = 2000
1000	47,0-49,0	1015	775	47,5-50,5	52,3 kW (71 PS) / n = 2000
950	51,0-53,0	970	800	52,5-59,5	53,0 kW / n = 1900
925	54,0-56,0	945	775	56,0-59,0	54,0 kW / n = 1850
900	55,0-57,0	910	775	55,5-58,5	53,0 kW (72 PS) / n = 1800
900	46,0-48,0	910	775	47,5-50,5	47,1 kW (64 PS) / n = 1800
900	43,5-45,5	920	775	45,0-48,0	46,0 kW / n = 1800
750	55,5-57,5	760	-	-	44,2 kW (60 PS) / n = 1500
750	47,5-49,5	760	-	-	39,7 kW (54 PS) / n = 1500

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### C. Settings for Fuel Injection Pump with Fitted Governor

<b>2b</b> Full-load stop Test oil temp 40°C (104°F)		<b>3</b> Rotational speed limit Note changed to ) rev/min	<b>3a</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	

F 5 L 912 - PES 5 A 80 D 410/3 RS 2327,2347 ICXN-power output (10% above rated output)

1500	50,5-52,5	1520	-	-	53,7 kW (73 PS) / n = 3010
1400	52,5-54,5	1420	-	-	56,0 kW (76 PS) / n = 2800
1325	53,5-55,5	1340	-	-	57,4 kW (78 PS) / n = 2650
1250	52,5-54,5	1270	-	-	56,0 kW (76 PS) / n = 2500
1150	55,5-57,5	1170	-	-	58,1 kW (79 PS) / n = 2300
1150	50,0-52,0	1170	-	-	53,7 kW (73 PS) / n = 2300
1075	53,5-55,5	1090	-	-	55,2 kW (75 PS) / n = 2150
1075	49,5-51,5	1090	-	-	51,5 kW (70 PS) / n = 2150
1000	58,0-60,0	1010	-	-	55,0 kW / n = 2000
1000	53,0-55,0	1015	-	-	52,3 kW (71 PS) / n = 2000
1000	48,0-50,0	1015	-	-	48,6 kW (66 PS) / n = 2000
990	54,5-56,5	910	-	-	47,8 kW (65 PS) / n = 1800
900	49,0-51,0	910	-	-	44,9 kW (61 PS) / n = 1800
860	49,5-51,5	870	-	-	43,4 kW (59 PS) / n = 1725
750	58,5-60,5	760	-	-	42,0 kW / n = 1500
750	54,0-56,0	760	-	-	39,7 kW (54 PS) / n = 1500
750	52,5-54,5	760	-	-	39,0 kW / n = 1500
750	47,0-49,0	760	-	-	36,0 kW / n = 1500
750	44,0-46,0	760	-	-	34,6 kW (47 PS) / n = 1500
750	42,0-44,0	760	-	-	34,0 kW / n = 1500

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### C. Settings for Fuel Injection Pump with Fitted Governor

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2b Full-load stop Test oil temp 40°C (104°F)		6 Rotational speed limit Note changed to ) rev/min		3a Fuel delivery characteristics		Output and speed - ..PS / ..U/min.	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min		rev/min	cm <sup>3</sup> /1000 strokes		
1	2	3		4	5		

F 6 L 912 - PES 6 A 80 D 410/3 RS 2273, 2348 (F- or B power output)

1450	52,0-54,0	1470	800	33,5-36,5	70,0 kW	/ n = 2900
1400	64,0-66,0	-	675	56,5-59,5	88,3 kW (120PS)	/ n = 2800*
1400	64,0-66,0	1420	800	53,5-56,5	88,3 kW (120PS)	/ n = 2800
1400	57,0-59,0	1420	800	45,0-48,0	78,0 kW	/ n = 2800
1375	63,5-65,5	1390	800	52,5-55,5	85,4 kW (116PS)	/ n = 2750
1375	60,5-62,5	1390	800	48,5-51,5	81,0 kW (110PS)	/ n = 2750
1325	64,5-66,5	1345	-	-	87,0 kW	/ n = 2650
1250	62,0-64,0	1270	800	52,5-55,5	82,4 kW (112PS)	/ n = 2500
1250	61,0-63,0	1270	800	50,0-53,0	81,0 kW (110PS)	/ n = 2500
1250	59,0-61,0	1270	800	48,5-51,5	78,0 kW (106PS)	/ n = 2500
1250	58,0-60,0	1270	-	-	78,0 kW	/ n = 2500
1200	59,5-61,5	1220	800	51,5-54,5	79,5 kW (108PS)	/ n = 2400
1200	55,0-57,0	1220	800	50,0-53,0	74,3 kW	/ n = 2400
1150	58,0-60,0	1170	-	54,0-57,0	78,0 kW (106PS)	/ n = 2300
1150	56,0-58,0	1170	775	53,0-56,0	75,1 kW (102PS)	/ n = 2300
1150	55,0-57,0	1170	800	52,0-55,0	74,0 kW	/ n = 2300
1100	55,0-57,0	1120	775	53,5-56,5	73,6 kW (100PS)	/ n = 2200
1075	55,0-57,0	1090	775	53,5-56,5	73,6 kW (100PS)	/ n = 2150
1075	53,0-55,0	1090	775	50,0-53,0	69,9 kW (95PS)	/ n = 2150
1000	48,5-50,5	1020	800	48,5-51,5	66,0 kW	/ n = 2000
900	47,5-49,5	920	600	48,0-51,0	44,0 kW	/ n = 1800
750	50,5-52,5	770	-	-	51,0 kW	/ n = 1500

ICXN power output (10% above rated output)

900	45,0-47,0	910	-	-	54,5 kW (+10%)	/ n = 1800
750	58,0-60,0	760	-	-	51,0 kW (+10%)	/ n = 1500
750	54,5-56,5	760	-	-	48,0 kW (+10%)	/ n = 1500
750	50,5-52,5	760	-	-	44,0 kW (+10%)	/ n = 1500
750	39,5-41,5	760	-	-	39,0 kW (+10%)	/ n = 1500

I5N-power output (5% above rated output)

900	54,4-56,5	910	-	-	63,0 kW (+5%)	/ n = 1800
750	52,0-54,0	760	-	-	50,0 kW (+5%)	/ n = 1500

\* valid for pump combinations with RQ governor

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### C. Settings for Fuel Injection Pump with Fitted Governor

<b>2b</b> Full-load stop Test oil temp 40°C (104°F)		<b>6</b> Rotational speed limit Note changed to ) rev/min		<b>3a</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5		

F6L912 - PES 6 A 75 D 410/3 RS 1197 (F-or B-power output)

1500	56,0-58,0	1520	800	40,5-43,5	76,5 kW (104 PS) / n = 3000
1500	55,0-57,0	1520	800	37,0-40,0	73,6 kW (100 PS) / n = 3000
1500	51,0-53,0	1520	800	35,0-38,0	69,2 kW (94 PS) / n = 3000
1400	57,5-59,5	1420	800	50,5-53,5	81,0 kW (110 PS) / n = 2800
1325	51,5-53,5	1345	800	45,0-48,0	73,5 kW / n = 2650
1250	53,0-55,0	1270	800	51,0-54,0	76,0 kW / n = 2500
1250	51,5-53,5	1270	800	50,5-53,5	74,0 kW / n = 2500
1250	49,0-51,0	1270	800	48,5-51,5	69,0 kW / n = 2500
1200	51,0-53,0	1220	750	52,0-55,0	74,0 kW / n = 2400
1150	50,0-52,0	1170	775	52,0-55,0	74,0 kW / n = 2300
1050	42,0-44,0	1065	775	39,5-42,5	58,9 kW (80 PS) / n = 2100
1000	50,5-52,5	1015	775	55,5-58,5	69,9 kW (95 PS) / n = 2000
1000	46,0-48,0	1015	775	51,5-54,5	66,2 kW (90 PS) / n = 2000
1000	44,5-46,5	1020	775	48,5-51,5	62,5 kW / n = 2000
1000	36,0-38,0	1020	800	33,0-36,0	46,0 kW / n = 2000
975	48,5-50,5	985	775	52,5-55,5	66,2 kW (90 PS) / n = 1950
950	51,5-53,5	970	775	55,0-58,0	67,0 kW / n = 1900
950	45,5-47,5	970	800	48,0-51,0	61,0 kW / n = 1900
950	42,0-44,0	960	775	42,0-45,0	56,7 kW (77 PS) / n = 1900
950	37,5-39,5	970	775	37,0-40,0	50,0 kW / n = 1900
900	53,5-55,5	910	775	54,5-57,5	64,0 kW (87 PS) / n = 1800
900	49,0-51,0	910	775	50,5-53,5	60,4 kW (82 PS) / n = 1800
900	41,0-43,5	920	800	43,0-46,0	54,0 kW / n = 1800
800	46,0-48,0	810	-	-	50,8 kW (69 PS) / n = 1600
750	55,5-57,5	760	-	-	53,7 kW (73 PS) / n = 1500
750	51,0-53,0	760	-	-	50,8 kW (69 PS) / n = 1500
750	47,0-49,0	760	-	-	47,8 kW (65 PS) / n = 1500

### C. Settings for Fuel Injection Pump with Fitted Governor

<b>2b</b> Full-load stop Test oil temp 40°C (104°F)		<b>3</b> Rotational speed limit Note changed to ) rev/min		<b>3a</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5		
F6L912 - PES 6 A 75 D 410/3 RS 1197,1326						ICXN power output (10% above rated output)
1500	52,5-54,5	1520	-	-	64,8 kW (88 PS) / n = 3000	
1400	53,5-55,5	1420	-	-	67,7 kW (92 PS) / n = 2800	
1325	53,5-55,5	1340	-	-	69,2 kW (94 PS) / n = 2600	
1250	51,0-53,0	1270	-	-	67,0 kW (91 PS) / n = 2500	
1150	52,5-54,5	1170	-	-	69,9 kW (95 PS) / n = 2300	
1150	49,0-51,0	1170	-	-	64,8 kW (88 PS) / n = 2300	
1100	45,0-47,0	1120	-	-	58,9 kW (80 PS) / n = 2200	
1075	49,5-51,5	1090	-	-	66,2 kW (90 PS) / n = 2150	
1075	47,0-49,0	1090	-	-	62,6 kW (85 PS) / n = 2150	
1000	50,5-52,5	1020	-	-	63,0 kW / n = 2000	
1000	45,0-47,0	1015	-	-	58,9 kW (78 PS) / n = 2000	
900	52,0-54,0	910	-	-	57,4 kW (78 PS) / n = 1800	
900	47,5-49,5	910	-	-	53,7 kW (73 PS) / n = 1800	
875	46,5-48,5	885	-	-	51,5 kW (70 PS) / n = 1750	
750	53,5-55,5	760	-	-	47,8 kW (65 PS) / n = 1500	
750	49,0-51,0	760	-	-	44,9 kW (61 PS) / n = 1500	

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

<b>(2b)</b> Full-load stop Test oil temp 40°C (104°F) rev/min   cm <sup>3</sup> /1000 strokes 1   2		<b>(3)</b> Rotational speed limit Note changed to ) rev/min 3	<b>(3a)</b> Fuel delivery characteristics rev/min   cm <sup>3</sup> /1000 strokes 4   5		Output and speed - ..PS / ..U/min.
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**9F6L912 - PES 6 A 85 D 410/3 RS 2278,2348 (F-power output)**

1400	76,5-78,5	1420	800	69,5-72,5	103,0 kW (140PS) / n = 2800
1400	73,0-75,0	1420	800	61,5-64,5	95,7 kW (130PS) / n = 2800
1400	70,0-72,0	1420	800	52,5-55,5	88,3 kW (120PS) / n = 2800
1325	76,5-78,5	1340	800	74,5-77,5	103,0 kW (140PS) / n = 2650
1325	73,5-75,5	1340	800	64,5-67,5	95,7 kW (130PS) / n = 2650
1325	70,0-72,0	1340	800	56,5-59,5	88,3 kW (120PS) / n = 2650
1325	66,0-68,0	1340	800	47,5-50,5	81,0 kW (110PS) / n = 2650
1250	76,5-78,5	1270	800	77,5-80,5	103,0 kW (140PS) / n = 2500
1250	73,0-75,0	1270	800	69,5-72,5	95,7 kW (130PS) / n = 2500
1250	69,5-71,5	1270	800	60,5-63,5	88,3 kW (120PS) / n = 2500
1200	73,0-75,0	1250	800	75,5-78,5	99,4 kW (135PS) / n = 2400
1200	69,0-71,0	1220	800	61,5-64,5	88,3 kW (120PS) / n = 2400
1150	72,0-74,0	1170	775	76,5-79,5	95,7 kW (130PS) / n = 2300
1150	68,0-70,0	1170	775	67,5-70,5	88,3 kW (120PS) / n = 2300
1150	63,0-65,0	1170	775	58,5-61,5	81,0 kW (110PS) / n = 2300
1100	68,0-70,0	1120	775	75,5-78,5	92,0 kW (125PS) / n = 2200
1075	64,0-66,0	1090	775	67,5-70,5	84,0 kW (115PS) / n = 2150
1075	62,0-64,0	1090	775	62,5-65,5	81,0 kW (110PS) / n = 2150
1050	59,0-60,5	1065	775	58,5-61,5	76,5 kW (104PS) / n = 2100
1000	62,0-64,0	1015	775	69,5-72,5	59,6 kW (110PS) / n = 2000
1000	59,0-61,0	1015	775	62,5-65,5	76,5 kW (104PS) / n = 2000
900	60,0-62,0	910	775	66,5-69,5	73,6 kW (100PS) / n = 1800
900	56,5-58,5	910	775	61,5-64,5	69,9 kW ( 95PS) / n = 1800
875	58,5-61,0	885	775	62,5-65,5	69,9 kW ( 95PS) / n = 1750
750	63,0-65,0	760	-	-	61,1 kW ( 83PS) / n = 1500
750	59,0-61,0	760	-	-	59,0 kW ( 80PS) / n = 1500

ICXN power output (10% above rated output)

1150	68,0-70,0	1170	-	-	81,0 kW (110PS) / n = 2300
1075	64,0-66,0	1090	-	-	77,3 kW (105PS) / n = 2150
1000	61,5-63,5	1015	-	-	73,6 kW (100PS) / n = 2000
900	59,0-61,0	910	-	-	66,2 kW ( 90PS) / n = 1800
900	47,0-49,0	910	-	-	55,9 kW ( 76PS) / n = 1800
750	63,0-65,0	760	-	-	55,9 kW ( 76PS) / n = 1500

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### C. Settings for Fuel Injection Pump with Fitted Governor

<b>2b</b> Full-load stop Test oil temp 40°C (104°F)		<b>6</b> Rotational speed limit Note changed to ) rev/min	<b>3a</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min 1	cm <sup>3</sup> /1000 strokes 2	3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	

F3L912 W - PES 3 A 75 D 410/3 RS 1183 (F-power output)

1400	61,0-63,0	1420	800	53,0-56,0	36,8 kW (50 PS) / n = 2800
1400	57,5-59,5	1420	800	50,0-53,0	34,6 kW (47 PS) / n = 2800
1325	59,0-61,0	1340	800	53,0-56,0	35,3 kW (48 PS) / n = 2650
1325	57,0-59,0	1340	800	50,5-53,5	33,9 kW (46 PS) / n = 2650
1250	58,5-60,5	1270	800	54,0-57,0	42,0 kW (57 PS) / n = 2500
1250	56,5-58,5	1270	800	51,5-54,5	33,1 kW (45 PS) / n = 2500
1250	53,5-55,5	1270	775	50,5-53,5	32,0 kW / n = 2500
1250	51,5-53,5	1270	800	46,0-49,0	29,4 kW (40 PS) / n = 2500
1250	49,5-51,5	1270	800	44,0-47,0	28,0 kW (38 PS) / n = 2500
1250	41,0-43,0	1270	775	34,0-37,0	20,0 kW / n = 2500
1150	57,0-59,0	1170	775	54,0-57,0	32,4 kW (44 PS) / n = 2300
1150	53,5-55,5	1170	775	50,0-53,0	30,2 kW (41 PS) / n = 2300
1150	49,5-51,5	1170	775	44,5-47,5	26,9 kW (36,5PS) / n = 2300
1100	48,5-50,5	1120	775	44,0-47,0	25,8 kW (35 PS) / n = 2200
1075	55,0-57,0	1090	775	53,0-56,0	30,2 kW (41 PS) / n = 2150
1075	53,0-55,0	1090	775	50,0-53,0	28,7 kW (39 PS) / n = 2150
1075	49,0-51,0	1090	775	44,5-47,5	25,8 kW (35 PS) / n = 2150
1050	50,0-52,0	1090	775	47,0-50,0	26,5 kW (36 PS) / n = 2100
1000	54,5-56,5	1015	775	53,5-56,5	28,7 kW (39 PS) / n = 2000
1000	50,0-52,0	1015	775	47,5-50,5	26,8 kW (35 PS) / n = 2000
900	53,0-55,0	910	775	44,0-47,0	26,1 kW (35,5PS) / n = 1800
900	51,5-53,5	910	775	50,5-53,5	25,0 kW (34 PS) / n = 1800
900	48,5-50,5	910	775	47,0-50,0	23,6 kW (32 PS) / n = 1800
750	52,5-54,5	760	-	-	22,1 kW (30 PS) / n = 1500
750	47,0-49,0	760	-	-	19,9 kW (27 PS) / n = 1500

ICXN power output (10% above rated output)

1150	54,5-56,5	1170	-	-	28,7 kW (39 PS) / n = 2300
1150	49,5-51,5	1170	-	-	25,0 kW (34 PS) / n = 2300
1075	54,0-56,0	1090	-	-	27,2 kW (37 PS) / n = 2150
1075	49,5-51,5	1090	-	-	24,3 kW (33 PS) / n = 2150
1000	53,0-55,0	1015	-	-	25,8 kW (35 PS) / n = 2000
1000	49,5-51,5	1015	-	-	23,6 kW (32 PS) / n = 2000
900	52,5-54,5	910	-	-	23,6 kW (32 PS) / n = 1800
900	48,0-50,0	910	-	-	21,3 kW (29 PS) / n = 1800
750	54,5-56,5	760	-	-	21,0 kW / n = 1500
750	51,0-53,0	760	-	-	19,9 kW (27 PS) / n = 1500
750	45,4-47,5	760	-	-	17,7 kW (24 PS) / n = 1500

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### C. Settings for Fuel Injection Pump with Fitted Governor

<b>2b</b> Full-load stop Test oil temp 40°C (104°F) rev/min   cm <sup>3</sup> /1000 strokes 1   2		<b>3</b> Rotational-speed limit Note changed to ) rev/min   3	<b>3a</b> Fuel delivery characteristics rev/min   cm <sup>3</sup> /1000 strokes 4   5	Output and speed - ..PS / ..U/min.
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F4L912 W - PES 4 A 75 D 410/3 RS 1183 (F power output)

1400	58,5-60,5	1420	800	52,0-55,0	49,3 kW (67 PS) / n = 2800
1400	55,0-57,0	1420	800	48,5-51,5	46,4 kW (63 PS) / n = 2800
1325	56,0-58,0	1340	800	51,0-54,0	47,1 kW (64 PS) / n = 2650
1325	53,5-55,5	1340	800	48,5-51,5	44,9 kW (61 PS) / n = 2650
1300	53,0-55,0	1320	800	48,5-51,5	44,2 kW (60 PS) / n = 2600
1250	55,0-57,0	1270	800	52,0-55,0	45,6 kW (62 PS) / n = 2500
1250	53,5-55,5	1270	775	50,5-53,5	44,0 kW / n = 2500
1250	52,5-54,5	1270	800	48,5-51,5	42,7 kW (58 PS) / n = 2500
1250	49,5-51,5	1270	800	45,0-48,0	39,7 kW (54 PS) / n = 2500
1250	49,5-51,5	1270	775	47,5-50,5	38,0 kW / n = 2500
1250	49,0-50,0	1270	800	46,5-49,5	38,0 kW (51 PS) / n = 2500
1150	54,5-56,5	1170	775	52,5-55,5	43,4 kW (59 PS) / n = 2300
1150	51,5-53,5	1170	775	48,5-51,5	40,5 kW (55 PS) / n = 2300
1150	50,5-52,5	1170	775	47,5-50,5	39,4 kW (53,5PS) / n = 2300
1150	47,5-49,5	1170	775	44,0-47,0	36,1 kW (49 PS) / n = 2300
1150	46,5-48,5	1170	775	43,0-46,0	35,0 kW / n = 2300
1100	46,5-48,5	1120	775	44,0-47,0	34,6 kW (47 PS) / n = 2200
1100	44,5-46,5	1120	775	41,0-44,0	32,4 kW (44 PS) / n = 2200
1075	52,0-54,0	1090	775	50,0-53,0	39,7 kW (54 PS) / n = 2150
1075	50,5-52,5	1090	775	48,5-51,5	38,3 kW (52 PS) / n = 2150
1075	46,5-48,5	1090	775	44,0-47,0	34,2 kW (46,5PS) / n = 2150
1000	52,0-54,0	1015	775	52,0-55,0	38,3 kW (52 PS) / n = 2000
1000	49,5-51,5	1015	775	48,5-51,5	36,1 kW (49 PS) / n = 2000
1000	46,5-48,5	1015	775	44,5-47,5	33,1 kW (45 PS) / n = 2000
900	51,0-53,0	910	775	50,0-53,0	34,6 kW (47 PS) / n = 1800
900	47,5-49,5	910	775	47,0-50,0	31,6 kW (43 PS) / n = 1800
900	45,5-47,5	910	775	44,5-47,5	30,5 kW (41,5PS) / n = 1800
750	51,0-53,0	760	-	-	29,4 kW (40 PS) / n = 1500
750	47,5-49,5	760	-	-	27,2 kW (37 PS) / n = 1500
750	45,0-47,0	760	-	-	25,8 kW (35 PS) / n = 1500

ICXN power output (10% above rated output)

1200	48,5-50,5	1220	-	-	34,2 kW (46,5PS) / n = 2400
1150	52,5-54,5	1170	-	-	38,3 kW (52 PS) / n = 2300
1150	47,0-49,0	1170	-	-	33,1 kW (45 PS) / n = 2300
1075	51,5-53,5	1090	-	-	36,1 kW (49 PS) / n = 2150
1075	47,5-49,5	1090	-	-	32,4 kW (44 PS) / n = 2150
1000	51,0-53,0	1015	-	-	34,6 kW (47 PS) / n = 2000
1000	47,5-49,5	1015	-	-	31,6 kW (43 PS) / n = 2000
900	51,0-53,0	910	-	-	31,6 kW (43 PS) / n = 1800
900	46,5-48,5	910	-	-	28,7 kW (39 PS) / n = 1800
750	50,0-52,0	760	-	-	26,5 kW (36 PS) / n = 1500
750	44,5-46,5	760	-	-	23,6 kW (32 PS) / n = 1500

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### C. Settings for Fuel Injection Pump with Fitted Governor

<b>(2b)</b> Full-load stop Test oil temp 40°C (104°F)		<b>(3)</b> Rotational speed limit Note changed to ) rev/min		<b>(3a)</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5		
F5L912 W - PES 5 A 80 D 410/3 RS 2347 (F-power output)						
1400	56,0-58,0	1420	800	50,5-53,5	61,1 kW (83 PS)	/ n = 2800
1400	53,0-55,0	1420	800	48,5-51,5	58,1 kW (79 PS)	/ n = 2800
1325	55,0-57,0	1340	800	50,5-53,5	58,9 kW (80 PS)	/ n = 2650
1325	53,0-55,0	1340	800	48,5-51,5	56,7 kW (77 PS)	/ n = 2650
1325	42,0-44,0	1345	800	36,5-39,5	41,0 kW	/ n = 2650
1250	55,0-57,0	1270	800	51,0-54,0	57,4 kW (78 PS)	/ n = 2500
1250	53,0-55,0	1270	800	49,5-52,5	55,2 kW (75 PS)	/ n = 2500
1250	49,5-51,5	1270	800	46,5-49,5	51,5 kW (70 PS)	/ n = 2500
1250	46,0-48,0	1270	800	42,0-45,0	46,4 kW (63 PS)	/ n = 2500
1200	54,0-56,0	1220	800	51,5-54,5	55,9 kW (76 PS)	/ n = 2400
1200	51,5-53,5	1220	800	48,5-51,5	53,0 kW (72 PS)	/ n = 2400
1150	53,5-55,5	1170	775	51,5-54,5	54,5 kW (74 PS)	/ n = 2300
1150	51,0-53,0	1170	775	51,5-54,5	52,0 kW	/ n = 2300
1150	50,0-52,0	1170	775	48,0-51,0	50,0 kW (68 PS)	/ n = 2300
1150	47,5-49,5	1170	775	45,5-48,5	47,1 kW (64 PS)	/ n = 2300
1150	46,0-48,0	1170	775	43,5-46,5	44,9 kW (61 PS)	/ n = 2300
1150	45,0-47,0	1170	775	43,0-47,0	44,0 kW	/ n = 2300
1150	44,5-46,5	1170	775	42,5-45,5	43,0 kW	/ n = 2300
1150	43,5-45,5	1170	775	42,0-45,0	41,5 kW	/ n = 2300
1150	42,0-44,0	1170	775	40,0-43,0	40,0 kW	/ n = 2300
1150	41,5-43,5	1170	775	39,0-42,0	39,0 kW	/ n = 2300
1150	40,5-42,5	1170	775	37,0-40,0	37,0 kW	/ n = 2300
1075	51,0-53,0	1090	775	49,5-52,5	50,0 kW (68 PS)	/ n = 2150
1075	49,5-51,5	1090	775	48,0-51,0	47,8 kW (65 PS)	/ n = 2150
1075	45,5-47,5	1090	775	43,5-46,5	42,7 kW (58 PS)	/ n = 2150
1000	50,5-52,5	1015	775	51,0-54,0	47,8 kW (65 PS)	/ n = 2000
1000	49,0-51,0	1015	775	48,5-51,5	45,6 kW (62 PS)	/ n = 2000
1000	45,0-47,0	1015	775	44,5-47,5	41,2 kW (56 PS)	/ n = 2000
900	50,0-52,0	910	775	49,5-52,5	43,4 kW (59 PS)	/ n = 1800
900	48,5-50,5	910	775	48,5-51,5	42,0 kW (57 PS)	/ n = 1800
900	45,0-47,0	910	775	44,5-47,5	38,3 kW (52 PS)	/ n = 1800
750	50,5-52,5	760	-	-	36,8 kW (50 PS)	/ n = 1500
750	46,5-48,5	760	-	-	33,9 kW (46 PS)	/ n = 1500
750	44,5-46,5	760	-	-	32,4 kW (44 PS)	/ n = 1500

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# C. Settings for Fuel Injection Pump with Fitted Governor

<b>2b</b> Full-load stop Test oil temp 40°C (104°F)		<b>2</b> Rotational speed limit Note changed to ) rev/min		<b>3a</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5		

F5L912 W - PES 5 A 80 D 410/3 RS 2347 ICXN power output (10% above rated output)

1150	51,0-53,0	1170	-	-	47,8 kW (65 PS) / n = 2300
1150	46,0-48,0	1170	-	-	42,0 kW (57 PS) / n = 2300
1075	50,5-52,5	1090	-	-	45,6 kW (62 PS) / n = 2150
1075	46,5-48,5	1090	-	-	40,5 kW (55 PS) / n = 2150
1000	49,0-51,0	1020	-	-	42,7 kW (58 PS) / n = 2000
1000	46,0-48,0	1015	-	-	39,0 kW (53 PS) / n = 2000
900	49,0-51,0	910	-	-	39,0 kW (53 PS) / n = 1800
900	45,0-47,0	910	-	-	35,3 kW (48 PS) / n = 1800
750	49,0-51,0	760	-	-	33,1 kW (45 PS) / n = 1500
750	44,0-46,0	760	-	-	29,4 kW (40 PS) / n = 1500

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### C. Settings for Fuel Injection Pump with Fitted Governor

<b>2b</b> Full-load stop Test oil temp 40°C (104°F)		<b>6</b> Rotational speed limit Note changed to ) rev/min		<b>3a</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5		

F6L912 W - PES 6 A 75 D 410/3 RS 1197,1326 (F-power output)

1400	56,5-58,5	1420	800	50,5-53,5	73,6 kW (100PS) / n = 2800
1400	53,5-55,5	1420	800	48,5-51,5	69,2 kW (94PS) / n = 2800
1325	55,5-57,5	1340	800	50,5-53,5	70,7 kW (96PS) / n = 2650
1325	53,5-55,5	1340	800	48,5-51,5	67,7 kW (92PS) / n = 2650
1300	53,0-55,0	1320	800	48,5-51,5	67,0 kW (91PS) / n = 2600
1250	55,5-57,5	1270	800	51,5-54,5	69,2 kW (94PS) / n = 2500
1250	51,5-53,5	1270	800	47,5-50,5	63,3 kW (86PS) / n = 2500
1250	48,5-50,5	1270	800	44,5-47,5	58,9 kW (80PS) / n = 2500
1250	46,5-48,5	1270	800	42,5-45,5	56,0 kW (76PS) / n = 2500
1250	43,0-45,0	1270	775	40,5-43,5	50,0 kW ( / n = 2500
1200	46,5-48,5	1220	800	42,5-45,5	54,5 kW (74PS) / n = 2400
1150	53,5-55,5	1170	775	51,5-54,5	64,8 kW (88PS) / n = 2300
1150	52,0-53,0	1170	775	52,0-54,0	63,0 kW ( / n = 2300
1150	50,5-52,5	1170	775	48,0-51,0	60,4 kW (82PS) / n = 2300
1150	49,0-51,0	1170	775	47,7-50,5	58,9 kW (80PS) / n = 2300
1150	47,0-49,0	1170	775	46,0-49,0	55,0 kW ( / n = 2300
1150	46,5-48,5	1170	775	43,0-46,0	53,7 kW (73PS) / n = 2300
1150	43,5-45,5	1170	775	39,5-42,5	49,3 kW (67PS) / n = 2300
1150	42,5-44,5	1170	775	39,5-42,5	48,0 kW ( / n = 2300
1100	43,5-45,5	1120	775	40,5-43,5	48,6 kW (66PS) / n = 2200
1075	51,5-53,5	1090	775	50,5-53,5	60,4 kW (82PS) / n = 2150
1075	49,5-51,5	1090	775	48,0-51,0	57,4 kW (78PS) / n = 2150
1075	45,5-47,5	1090	775	43,0-46,0	51,5 kW (70PS) / n = 2150
1000	51,0-53,0	1015	775	51,0-54,0	57,4 kW (78PS) / n = 2000
1000	49,0-51,0	1015	775	48,5-51,5	54,5 kW (74PS) / n = 2000
1000	45,5-47,5	1015	775	44,5-47,5	49,3 kW (67PS) / n = 2000
900	50,5-52,5	910	775	50,5-53,5	52,3 kW (71PS) / n = 1800
900	48,5-50,5	910	775	48,0-51,0	50,0 kW (68PS) / n = 1800
900	45,5-47,5	920	775	45,5-48,5	47,0 kW ( / n = 1800
900	45,0-47,0	910	775	44,5-47,5	45,6 kW (62PS) / n = 1800
900	42,0-44,0	920	775	41,0-44,0	42,5 kW ( / n = 1800
750	50,5-52,5	760	-	-	44,2 kW (60PS) / n = 1500
750	45,5-47,5	760	-	-	39,7 kW (54PS) / n = 1500
750	44,5-46,5	760	-	-	38,3 kW (52PS) / n = 1500

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

-34-

<b>2b</b> Full-load stop Test oil temp 40°C (104°F)		<b>2</b> Rotational speed limits Note changed to ) rev/min		<b>3a</b> Fuel delivery characteristics		Output and speed - ..PS / ..U/min.
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5		

F6L912W - PES 6 A 75 D 410/3 RS 1197,1326

ICXN power output (10% above rated output)

1150	51,5-53,5	1170	-	-	57,4 kW (78 PS) / n = 2300
1150	46,5-48,5	1170	-	-	50,0 kW (68 PS) / n = 2300
1075	50,5-52,5	1090	-	-	54,5 kW (74 PS) / n = 2150
1075	46,5-48,5	1090	-	-	48,6 kW (66 PS) / n = 2150
1000	50,0-52,0	1015	-	-	51,5 kW (70 PS) / n = 2000
1000	46,5-48,5	1015	-	-	47,1 kW (64 PS) / n = 2000
900	49,5-51,5	910	-	-	47,1 kW (64 PS) / n = 1800
900	45,5-47,5	910	-	-	42,7 kW (58 PS) / n = 1800
750	49,5-51,5	760	-	-	39,7 kW (54 PS) / n = 1500
750	44,5-46,5	760	-	-	35,3 kW (48 PS) / n = 1500

B10

B10 En

Testoil-ISO 4113

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 IHC 9,4a

2. Edition

En

PES 8 P 100 A 921/5 RS 286 RQV 325-1250 PA 445 KR

1-8-4-2-7-3-6-5 je 45° ±0,5° (±0,75°)

Values only apply to test nozzle-and-holder assembly 1 688 901 017 and fuel-injection test tubing 9 681 230 713

Suction-gallery pressure 2,8 bar

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

supersedes 5.83

company: IHC

engine: DVT 573 B

Komb.-Nr.

0 402 058 045

## A. Fuel Injection Pump Settings

Port closing at prestroke <sup>2,7-2,8</sup> (2,65-2,85) mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1250	9,6-9,7	10,9-11,1	0,4			
325	5,0-5,1	1,7-2,3	0,6			

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel ①	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm ④	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm ③	rev/min 10	mm 11
ca. 60	8,6 4,0 1640	1290-1300 1375-1405 0 - 1,0	-	-	-	ca. 11	100 325 470-530	6,2-7,5 5,5-6,2		
						390-450 ③a				

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ②b	Fuel delivery characteristics ⑤a		Starting fuel delivery idle switching point ⑥		Torque-control ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5b	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9
LDA 1250	0,8 bar 109,0-111,0 (107,0-113,0)	1290-1300*	LDA 900	0,8 bar 115,0-121,0 (113,0-123,0)	100	min. 170,0	1250	9,5+0,1
			LDA 800	0 bar 73,0-81,0 (71,0-83,0)	325	17,0-23,0	900	10,0+0,1
							700	9,8+0,1

Checking values in brackets

\* 1 mm less control rod travel than col. 2

5.06



# Test Specifications Fuel Injection Pumps (1A) and Governors

40

VDT-WPP 001/4

7. Edition

En

PES 4 A 85 D 420 LS 2459 EP/RSV 375-1100 A 2 B 649 DR

supersedes 16.9.70, 17.2.71  
comparase 29.4.71  
eng. A301BD 15.2.72  
20.7.72  
24.11.72

Test with case overflow valve  
and regulator in accordance with special setting.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke

mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> /100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1100	11,5	7,3-7,4	0,3			
375	7,2	1,52-2,12				

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

① Upper rated speed rev/min Degree of deflection of control lever 1	Control rod travel		Intermediate rated speed			④ Control-lever deflection in degrees 7	Lower rated speed		③ Torque control rev/min 10	Control rod travel mm 11
	mm 2	mm rev/min 3	4	5	6		rev/min 8	mm 9		
ca. 43	1140	11,2-11,8	without auxiliary spring			ca. 22	375	7,2	1100	0
	1150	10,4-10,8				150	19 - 21	900	0,3-0,4	
	1160	6,0- 7,4				375	7,0-7,4	500	0,4-0,7	
	1220	2,2- 4,4				600	0 - 1			
②a	1300	0,3- 1	300	10,7-12,5						
			480	1,6- 4,4						

The numbers denote the sequence of the tests

## C. Settings for Fuel Injection Pump with Fitted Governor

②b Full-load stop Test oil temp 40°C (104°F)		⑥ Rotational-speed limit Note changed to ) rev/min 3	③a Fuel delivery characteristics		Starting fuel delivery idle ⑤		④a Idle stop	
rev/min 1	cm <sup>3</sup> /1000 strokes 2		rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9
1100	72,5-74,5 (71,5-75,5)	1140-1155* (1135-1160)	750 650	74,5-78,5 max. 77,5	100	124,0- 134,0	375	15,2- 21,2
			1200	4,5-10,5				

Checking values in brackets

\* 1 mm less control rod travel than col 2

8.74

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B12

B.42

# Test Specifications Fuel Injection Pumps (1A) and Governors

40

VDT-WPP 001/4

6. Edition

En

PES 6 P 100 A 720 RS 1010 EP/RSV 400-1050 P2/370 D

supersedes 12.74 (4)  
company John Deere  
engine 6531 A

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,4 + 0,1 mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> /100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1050	12,8	14,8-15,0	0,3			
400	6,7	1,9- 2,5	0,3			

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

① Upper rated speed rev/min Degree of deflection of control lever mm 1	Control rod travel		Intermediate rated speed			④ Control-lever deflection in degrees 7	Lower rated speed		③ Torque control		
	mm 2	mm rev/min 3	4	5	6		rev/min 8	Control rod travel mm 9	rev/min 10	Control rod travel mm 11	
ca.43	1050	15,6-16,4	without auxiliary spring			ca.19	400	7,2	1050	0	
②a	1100	6,2- 9,6				200	19 - 21	750	0 -1,5	750	0,8-1,0
	1150	3,8- 5,2				350	11,0-14,0	500	1,4- 4,2	500	0,8-1,0
	1220	0,3- 2,6				600					
	1260	0,3- 1,5									

The numbers denote the sequence of the tests

## C. Settings for Fuel Injection Pump with Fitted Governor

②b Full-load stop Test oil temp 40°C (104°F)		⑥ Rotational-speed limit Note changed to ) rev/min 3	③a Fuel delivery characteristics		Starting fuel delivery Idle		④a Idle stop	
rev/min 1	cm <sup>3</sup> /1000 strokes 2		rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9
0,8	bar	1085-1095 (1080-1100)	750	0,8	100	160,0-190,0		
1050	148,0-150,0 (146,0-152,0)		XX	164,5-167,5 (163,0-169,0)				
			0	bar				
			550	108,0-116,0	400	19,0-25,0		

Checking values in brackets

\* 1 mm less control rod travel than col. 2

8.75

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# Test Specifications Fuel Injection Pumps (1A) and Governors

40

VDT-WPP 001/4

7. Edition

En

PES 4 A 85 C 420 LS 2263 EP/RSV 375-1100 A 2 B 579 DR

superseded	16.9.70, 17.2.71
company	Case 29.4.71
engine	15.2.72
A301 BD	20.7.72
	24.11.72

Test with case overflow valve and regulator in accordance with special setting.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke mm (from BDC)

Rotational speed rev/min	Control rod travel mm	Fuel delivery cm <sup>3</sup> /100 strokes	Difference cm <sup>3</sup> /100 strokes	Control rod travel mm	Fuel delivery cm <sup>3</sup> /100 strokes	Spring pre-tensioning (torque-control valve) mm
1	2	3	4	2	3	6
1000	9	4,15 - 4,55	0,4			
200	6	1,15 - 1,95				
	12	7,25 - 8,05				
	6	0,95 - 1,75				

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

1 Upper rated speed rev/min			Intermediate rated speed			4 Lower rated speed			3 Torque control		
Degree of deflection of control lever	Control rod travel mm	Control rod travel mm rev/min	4	5	6	Control lever deflection in degrees	rev/min	Control rod travel mm	rev/min	Control rod travel mm	
1	2	3	4	5	6	7	8	9	10	11	
ca. 43	1120	11,4	without auxiliary spring			ca. 22	375	7,2	1100	0	
2a	1160	7,4				150	19 - 21	900			0,3-0,5
	1210	2,2				375	6,9-7,5				
	1140	11,2-11,8	450	3,6-5,2	500	0,4-0,7					
	1200	4,5- 5,8	with auxiliary spring				600	0-1			
	1300	0,3- :									

The numbers denote the sequence of the tests

## C. Settings for Fuel Injection Pump with Fitted Governor

2b Full-load stop		6 Rotational-speed limit		3a Fuel delivery characteristics		Starting fuel delivery		5 Idle stop	
Test oil temp 40°C (104°F)	rev/min	cm <sup>3</sup> /1000 strokes	Note changed to rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
	1	2	3	4	5	6	7	8	9
	1100	73,5 - 75,5	1140-1155*	750	76,5 - 79,5	100	124,0 - 134,0	375	15,5-19,5
				650	max. 78,0				
				1200	6,5 -14,5				

Checking values in brackets

\* 1 mm less control rod travel than col. 2

8.74

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# Test Specifications Fuel Injection Pumps (1A) and Governors

40

VDT-WPP 001/4 IHC 2,2q

En

PES 4 M 65 A 420 LS 35 X	EP/RSV 250-950 M1A 103D, 105D	supersedes	13.4.62
LS 35 W	-1000 M1A 103D, 105D	company	IHC
LS 35 T		engine	DD 148
LS 35 S			DD 132

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 1,7 + 0,1 mm (from BDC)

Rotational speed rev/min	Control rod travel mm	Fuel delivery cm <sup>3</sup> /100 strokes	Difference cm <sup>3</sup> /100 strokes	Control rod travel mm	Fuel delivery cm <sup>3</sup> /100 strokes	Spring pre-tensioning (torque-control valve) mm
1	2	3	4	2	3	6
1000	12	3,2-3,7	0,3			
200	9	1,5-2,3				
	18	6,7-7,5				
200	9	0,6-1,3				

Adjust the fuel delivery from each outlet according to the values in

Testoil-ISO 4113

## B. Governor Settings

EP/RSV 250-950 M 1 A 105 D

1 Upper rated speed rev/min			Intermediate rated speed			4 Lower rated speed			3 Torque control			
Degree of deflection of control lever	Control rod travel mm	Control rod travel mm rev/min	4	5	6	Control lever deflection in degrees	rev/min	Control rod travel mm	rev/min	Control rod travel mm		
1	2	3	4	5	6	7	8	9	10	11		
ca. 58	950	16	without auxiliary spring			ca. 31	250	9	930	0		
	1000	12,4							100	19-19,5	700	0,3-0,5
	1050	8,2							250	8,7-9,3	500	0,7-0,9
2a	1020	9,4-12	with auxiliary spring				400	5,5-7,4				
	1100	4,2-6,8							500	1,8-5,6		
	1150	1,4-4,8							750	0 - 1		
	1250	0 - 1										

The numbers denote the sequence of the tests

## C. Settings for Fuel Injection Pump with Fitted Governor

2b Full-load stop		6 Rotational-speed limit		3a Fuel delivery characteristics		Starting fuel delivery Idle		5 Idle stop	
Test oil temp 40°C (104°F)	Note	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	3	4	5	6	7	8	9		
930	960	500	39,5-41,5	42,0-45,0					
		700		40,0-42,0					

Checking values in brackets

\* 1 mm less control rod travel than col 2

12.64

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## B. Governor Settings

EP/RSV 250-950 M 1 A 103 D IHC 2,2 q

Upper rated speed			Intermediate rated speed			Lower rated speed			Torque-control travel	
Degree of deflection of control lever	rev/min Control rod travel mm	Control rod travel mm rev/min	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	rev/min	mm
1	2	3	4	5	6	7	8	9	10	11
ca. 58	950 1000 1050 1020 1100 1150 1250	16 12,4 8 9 - 11,6 4 - 6,5 1 - 4,4 0 - 1	without auxiliary spring			ca. 31	250 100 250 400 500 700	9 19-19,5 8,7-9,3 5,5-7,3 1,8-5,6 0 - 1	930 700 500	0 0,6-0,8 1,0-1,2

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp 40°C (104°F)		Rotational-speed limitation intermediate speed	Fuel delivery characteristics high idle speed		Starting fuel delivery idle switching point		Torque-control travel	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9
X 930	32,0-34,0	960	500 700	36,5-39,5 34,5-36,5				

Checking values in brackets

\* 1 mm less control rod travel than col 2

Testoil-ISO 4113

## B. Governor Settings

EP/RSV 250-1000 M 1 A 103 D

Upper rated speed			Intermediate rated speed			Lower rated speed			Torque-control travel	
Degree of deflection of control lever	rev/min Control rod travel mm	Control rod travel mm rev/min	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	rev/min	mm
1	2	3	4	5	6	7	8	9	10	11
ca. 62	1000 1050 1100 1080 1150 1200 1300	16 12,6 8,4 8,5-11,2 4,2- 6,8 1,2- 4,8 0 - 1	without auxiliary spring			ca. 32	250 100 250 400 500 720	9 19-19,5 8,7- 9,3 5,6- 7,4 1,8- 5,6 0 - 1	980 800 500	0 0,3-0,5 1,0-1,2

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp 40°C (104°F)		Rotational-speed limitation intermediate speed	Fuel delivery characteristics high idle speed		Starting fuel delivery idle switching point		Torque-control travel	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9
S 980	32,0-34,0	1010	500 800	36,5-39,5 34,5-36,5				

Checking values in brackets

\* 1 mm less control rod travel than col 2

En

### B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Torque-control travel	
Degree of deflection of control lever	rev/min Control rod travel mm	Control rod travel mm rev/min	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	rev/min	mm
1	2	3	4	5	6	7	8	9	10	11
ca.62	1000	16				ca.32	250	9	980	0
	1050	12,6	without auxiliary spring				100	19- 19,5	700	0,3-0,5
	1100	8,4					250	8,7- 9,3	500	0,7-0,9
	1080	8,5-11					400	5,6-7,4		
	1150	4,2-6,8	with auxiliary spring				500	2 -5,6		
	1200	1,2-4,8					700	0 - 1		
	1300	0 - 1								

Torque control travel a = mm

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp 40°C (104°F)		Rotational-speed limitation intermediate speed	Fuel delivery characteristics high idle speed		Starting fuel delivery idle switching point		Torque-control travel	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9
T 980	39,5-41,5	1010	500	42,0-45,0				
			800	40,0-42,0				

Checking values in brackets

\* 1 mm less control rod travel than col: 2

Testoil-ISO 4113

### D. Adjustment Test for Manifold Pressure Compensator

Test at n = rev/min decreasing pressure - in bar gauge pressure / increasing pressure - in bar gauge pressure

Pump/governor	Setting Gauge pressure = bar	Measurement Gauge pressure = bar	Control rod travel- diminution difference mm

En

# Test Specifications Fuel Injection Pumps (1A) and Governors

40

WPP 001/4

1. Edition

En

PES 6 A 100 D 410 RS3025Z EP/RSV 400-1100 A2B765DL  
RS 3025 EP/RSV 400-1100 A2B766DL  
RS 3025 EP/RSV 400-1100 A7B767 L

supersedes -  
company John Deere  
engine 6404 A

Test-pressure line 6 x 2 x 600 Inlet pressure 1.5 bar

Manifold-pressure compensator (LDA) adjustment page 3!

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke  $2,0+0,1(-0,05)$  mm (from BDC)

Port closing mark 14 °  
after port closing.

Testoil-ISO 4113

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> /100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	9	7,6 - 8,3	0,5			
	6	3,2 - 4,2				
	12	12,2 - 13,5				
200	9	4,0 - 5,2				

Adjust the fuel delivery from each outlet according to the values in

400-1100 A2B765DL mit 3025Z

## B. Governor Settings

1 Upper rated speed rev/min Degree of deflection of control lever 1	Control rod travel		Intermediate rated speed			4 Control lever deflection in degrees 7	Lower rated speed		3 Torque control rev/min 10	Control rod travel mm 11
	Control rod travel mm 2	Control rod travel mm rev/min 3	4	5	6		rev/min 8	Control rod travel mm 9		
ca. 43	1060	16,0	without auxiliary spring			ca. 21	400	6,3	1100	0
	1145	9,5					200	19 - 21		
	1200	4,5					400	6,0-6,6		
	1100	ca. 10,5					450	3,7-4,8		
	1200	ca. 4,5					560	0 - 1		
2a	1250	0,3-1,0						500	0,4-0,7	

The numbers denote the sequence of the tests

## C. Settings for Fuel Injection Pump with Fitted Governor

2b Full-load stop Test oil temp 40°C (104°F)		6 Rotational speed limit Note changed to 1 rev/min 3	3a Fuel delivery characteristics		Starting fuel delivery Idle		4a Idle stop	
rev/min 1	cm <sup>3</sup> /1000 strokes 2		rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9
LDA 1100	0,8 bar 107,5-109,5	1140-1150* (1135-1155)	LDA 750	0,8 bar 118,5-121,5	100	156,0-176,0	400	6,3
			LDA 550	0 bar 53,0-59,0	400 1200	11,5-15,5 20,5-26,5		

Checking values in brackets

\* 1 mm less control rod travel than col 2

9.76

B18

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The numbers denote the sequence of the tests

400-1100 A2B766DL

**B. Governor Settings**

① Upper rated speed rev/min			Intermediate rated speed			④ Lower rated speed			③ Torque control	
Degree of deflection of control lever	Control rod travel mm	Control rod travel mm rev/min				Control-lever deflection in degrees	rev/min	Control rod travel mm	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9	10	11
ca.43	1060	16,0	without auxiliary spring			ca.21	400		1100	0
	1145	9,3					200	19 - 21		
	1200	4,3					400	6,0-6,6		
	1100	ca.10,4					500	0,4-3,2		
	1200	ca. 4,3					580	0 - 1		
	1270	0,3-1,0					with auxiliary spring			
②a										

Testoil-ISO 4113

**C. Settings for Fuel Injection Pump with Fitted Governor**

②b Full-load stop		⑥ Rotational-speed limitat.		③a Fuel delivery characteristics		Starting fuel delivery Idle		⑤ ④a Idle stop			
Test oil temp. 40°C (104°F)											
rev/min	cm³/1000 strokes	Note: changed to ... rev/min	rev/min	cm³/1000 strokes	rev/min	cm³/1000 strokes	rev/min	Control rod travel mm			
1	2	3	4	5	6	7	8	9			
LDA	0,8 bar	1140-1150* (1135-1155)	LDA	0,8 bar	100	156,0-176,0	400	6,3			
1100	107,0-109,0		500	122,5-125,5						400	11,5-15,5
										1200	18,5-28,5
(increase by 2,0 cm³!)											

Checking values in brackets

\* 1 mm less control rod travel than col 2

**B. Governor Settings**

① Upper rated speed rev/min			Intermediate rated speed			④ Lower rated speed			③ Torque control	
Degree of deflection of control lever	Control rod travel mm	Control rod travel mm rev/min				Control-lever deflection in degrees	rev/min	Control rod travel mm	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9	10	11
ca.72	1070	16,0	without auxiliary spring			ca.30	400	6,3		
	1100	11,6					150	19 - 21		
	1150	4,2					400	6,0-6,6		
	1080	ca. 10,6					450	1,7-3,7		
	1120	7,0- 9,6					500	0 - 1		
	1180	0,3- 1,0					with auxiliary spring			
②a										

**C. Settings for Fuel Injection Pump with Fitted Governor**

②b Full-load stop		⑥ Rotational-speed limitat.		③a Fuel delivery characteristics		Starting fuel delivery Idle		⑤ ④a Idle stop	
Test oil temp. 40°C (104°F)									
rev/min	cm³/1000 strokes	Note: changed to ... rev/min	rev/min	cm³/1000 strokes	rev/min	cm³/1000 strokes	rev/min	Control rod travel mm	
1	2	3	4	5	6	7	8	9	
1080	112.0-114,0	1110-1120* (1105-1125)			100	156,0-176,0	400	6,3	
			400	11,5-15,5					
			1150	11,5-21,5					
(increase by 2,0 cm³)									

Checking values in brackets

\* 1 mm less control rod travel than col 2

### D. Adjustment Test for Manifold Pressure Compensator

Test at n = ~~XXXXXXX~~ decreasing pressure - in bar gauge pressure

**Testoil-ISO 4113**

Pump/governor	Setting	Measurement	Control rod travel - diminution difference
	Gauge pressure = bar	Gauge pressure = bar	mm (1)
3025Z with 765DL	0,62	0,11	-0,1-0,2 -3,0-3,3
3025 with 766DL	0,55	0,11	-0,1-0,2 -2,6-2,8
3025 with 767 L	without	L D A	- - - -
Switching point (hydr. measurement)	max. 0,76	mind. 0,48	10 - 11 mm RW 19 - 21 mm RW

Notes

(1) when n = ~~XXXXXXX~~ rev/min and gauge pressure = bar (- maximum full-load control rod travel)

Preliminary adjustment, dimension H = 21,8 mm

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 VOL 10,0 f

4. Edition

En

PE 6 P 110 A 320 RS 273, Z RQV 250-1200 PA 238/2R

Port-closing test with/without ROBO diaphragm

supersedes 8.77  
company: VOLVO  
engine: TD 100 B

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke  $\frac{2,60-2,70}{(2,55-2,75)}$  mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	12	18,2 - 18,9	0,6			2,5 <sup>±</sup> 0,1** (max. 2,2-2,9)
600	15	27,5 - 29,4				
200	9	7,9 - 9,1				

\*\* In the case of greater dispersion alter the delivery-valve spring pre-tension accordingly

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

273 with 1200

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm 6	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm 9	rev/min 10	mm 11
ca. 50	1290	15,0-18,4				ca. 13	100	8,8-11,0	350	1,4-2,0
	1560	0					200	7,1- 9,9	600	4,4-4,8
ca. 45	1200	15,0-18,2					300	3,8- 6,8	1290	8,2
	1300	8,2-13,3					400	0 - 3,6		
	1400	0 - 7,4					510	0	-	-
	1510	0								

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ④a	Fuel delivery characteristics high idle speed ⑤b		Starting fuel delivery idle switching point ⑥		Torque-control travel ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9
LDA	0,85 bar		LDA	0 bar	100	20,5-21,0 mm RW		
700	158,5-161,5 (156,5-163,5)	1230-1240*	700	113,5-116,5 (115,5-118,5)	250	11-15 dispersion max.2,5		./.

Checking values in brackets

\* 1 mm less control rod travel than col 2

## B. Governor Settings

273 Z with 1200

VOL 10,0 f -2-

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever	rev/min Control rod travel mm	Control rod travel mm rev/min	Degree of deflection of control lever	rev/min	Control rod travel mm	Degree of deflection of control lever	rev/min	Control rod travel mm	rev/min	mm
1	2	3	4	5	6	7	8	9	10	11
ca. 50	1290	15,0-18,4				ca. 13	100	8,8-11,0	350	1,4-2,0
	1560	0					200	7,1- 9,9	600	4,4-4,8
ca. 45	1200	15,0-18,2					300	3,8-6,8	1290	8,2
	1300	8,2-13,3					400	0 - 3,6		
	1400	0 - 7,4					510	0		
	1510	0								

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp 40°C (104°F)		Rotational speed limitation intermediate speed	Fuel delivery characteristics high idle speed	Starting fuel delivery idle switching point	Torque-control travel
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min
1	2	3	4	5	6
LDA 700	0,85 bar 135,5-138,5 (133,5-140,5)	1230-1240*	LDA 700	0 bar 113,5-116,5 (111,5-118,5)	100
					250
					dispersion max.2,5**

Checking values in brackets

\* 1 mm less control rod travel than col: 2

## D. Adjustment Test for Manifold Pressure Compensator

Test at n = rev/min decreasing pressure - in bar gauge pressure  
increasing

Pump/governor	Setting	Measurement	Control rod travel diminution difference
	Gauge pressure = bar	Gauge pressure = bar	mm
273 with 1200	0,52 - 0,54	0,11 - 0,19	---
273 Z with 1200	0,40 - 0,42	0,11 - 0,19	---

En

**Testoil-ISO 4113**

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 ALO 11,0 a  
1. Edition

En

PES 6 P 110 A 320 RS 211 RQV 300 1000 PA 217 KR  
0 402 046 083  
1 - 5 - 3 - 6 - 2 - 4  
Calibrating nozzle-and-holder assembly 0 681 343 009  
Test-pressure line 9 681 230 704

supersedes  
company Allis-Chalmers  
11000  
engine

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8+0,1 mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	12	160-168				
600	9	85- 91				
	12	152-161				
200	15	215-233				
	9	68- 81				

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

Testoil-ISO 4113

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel ①	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	①a Degree of deflection of control lever 4	rev/min 5	Control rod travel mm ④	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm ③	rev/min 10	mm 11
66°	1050	15,0-18,0				10°	250	6,4-8,0		
	1100	10,8-15,0					300	4,8-7,0		
	1150	5,8-11,6					350	3,0-5,2		
	1200	0,7- 7,8					400	2,2-3,8		
	1300	0					550	0		

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ②b	Fuel delivery characteristics high idle speed ⑤b		Starting fuel delivery idle switching point ⑧		Torque-control travel ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	④a rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

Checking values in brackets

\* 1 mm less control rod travel than col. 2

# C. Settings for Fuel Injection Pump with Fitted Governor

AL.O 11,0 a

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 392 715								
1050	187,0-193,0	1070	900	174,0-180,0	100	130,0-170,0	300	19,0-25,0
			700	175,0-181,0				
AC-Nr. 4 392 717								
1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 719								
1050	200,0-206,0	1070	900	190,0-196,0	100	130,0-170,0	300	19,0-25,0
			700	214,0-220,0				
AC-Nr. 4 392 721								
1050	242,0-248,0	1070	900	220,0-226,0	100	130,0-170,0	300	19,0-25,0
			700	230,0-236,0				
AC-Nr. 4 392 723								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 725								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 727								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 729								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 731								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 392 735								
1050	239,0-245,0	1070	900	233,0-239,0	100	130,0-170,0	300	19,0-25,0
			700	273,0-279,0				
AC-Nr. 4 392 737								
1000	215,0-221,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
			600	220,0-226,0				
AC-Nr. 4 392 739								
1050	207,0-213,0	1070	900	195,0-201,0	100	130,0-170,0	300	19,0-25,0
			700	225,0-231,0				
AC-Nr. 4 392 741								
1050	213,0-219,0	1070	900	202,0-208,0	100	130,0-170,0		
			700	230,0-236,0				
AC-Nr. 4 392 743								
En 1050	220,0-226,0	1070	900	210,0-216,0	100	130,0-170,0	300	19,0-25,0
			700	243,0-249,0				

\* 1 mm less control rod travel than col 2

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery Idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 392 747

1050 227,0-233,0 1070 900 208,0-214,0 700 247,0-253,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 749

1050 230,0-234,0 1070 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 750

1050 230,0-234,0 1070 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 768

800 123,0-133,0 820 600 132,0-142,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 775/776

875 162,0-164,0 890 600 140,0-144,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 777

950 205,0-207,0 970 700 195,0-199,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 778

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 392 779

1025 190,0-200,0 1030-40 1000 191,0-201,0 900 178,0-188,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 781

1025 228,0-238,0 1050-60 900 205,0-215,0 700 207,0-217,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 953

940 185,0-195,0 955-65 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 095

1050 211,0-221,0 1060-80 900 210,0-220,0 700 238,0-248,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 307

900 210,0-216,0 920 700 212,0-128,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 393 431

1050 208,0-214,0 1070 900 230,0-235,0 700 260,0-266,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 821

1050 242,0-248,0 1070 900 220,0-226,0 700 230,0-236,0 100 130,0-170,0 300 19,0-25,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

**Testoil-ISO 4113**

C1



# C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 393 823

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 393 825

1050 224,0-230,0 1070 800 185,0-191 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 827

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 393 829

1050 230,0-234,0 1070 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 831

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0  
700 230,0-236,0

AC-Nr. 4 393 833

1050 264,0 1060-1080 900 280,5 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 393 835

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

AC-Nr. 4 393 837

1050 227,0-233,0 1070 900 208,0-214,0 100 130,0-170,0 300 19,0-25,0  
700 247,0-253,0

AC-Nr. 4 393 890

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 393 891

955 208,0 965-975 895 203,0

AC-Nr. 4 393 961

900 181,0-187,0 920 700 172,0-178,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 001

700 218,0-224,0 720 600 240,0-246,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 017

950 208,0-214,0 990 750 196,0-202,0 100 130,0-170,0 300 21,0-27,0

AC-Nr. 4 394 020

700 249,0-257,0 725 600 258,0-264,0 100 130,0-170,0 300 19,0-29,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En AC-Nr. 4 394 062

800 113,0-119,0 820 600 102,0-108,0 100 130,0-170,0 300 19,0-25,0

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery Idle switching point (6)		Low idle speed (5)	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9
AC-Nr. 4 394 064	875 161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 066	800 125,0-131,0	820	600	134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 068	1025 192,0-198,0	1045	900	180,0-186,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 070	1000 200,0-206,0	1020	800 600	180,0-186,0 189,0-195,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 072	940 185,0-195,0	955-65			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 074	1025 230,0-236,0	1040	900 700	207,0-213,0 209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 076	1000 227,0-233,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 078	1000 235,0-241,0	1020	700	263,0-269,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 080	1000 220,0-226,0	1020	800 600	209,0-215,0 227,0-233,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 082	910 190,0	930,0			100	130,0-170,0	300	25,0
AC-Nr. 4 394 084	900 160,0-166,0	920	700	139,0-145,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 086	600 124,0-130,0	620			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 088	700 127,0-133	720	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 090	800 139,0-145,0	820	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 092	925 157,0-163,0	945	800 600	145,0-151,0 134,0-140,0	100	130,0-170,0	300	19,0-25,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics high idle speed (5b) (5a)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 394 094	1000	180,0-186,0	1020	800 700	154,0-160,0 142,0-148,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 096	1050	207,0-213,0	1070	900 800	161,0-175,0 147,0-153,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 098	900	187,0-193,0	920	700	162,0-168,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 100	900	200,0-206,0	920	700	184,0-190,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 102	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 104	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 106	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 108	1050	222,0-228,0	1075	900 700	202,0-208,0 207,0-213,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 110	1000	240,0-246,0	1020	800 600	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 112	1050	245,0-251,0	1070	900 700	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 114	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 116	900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 118	1050	269,0-275,0	1070	900 700	281,0-287,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 120	1050	234,0-240,0	1070	900 700	246,0-252,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0	
AC-Nr. 4 394 122	1050	262,0-268,0	1070	900 700	279,0-285,0 289,0-295,0	100	130,0-170,0	300	19,0-25,0	
AC-Nr. 4 394 124	1050	241,0-247,0	1070	900 700	265,0-271,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0	
AC-Nr. 4 394 126	900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0	
AC-Nr. 4 394 128	750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0	
AC-Nr. 4 394 130	800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0	
AC-Nr. 4 394 132	1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0	
AC-Nr. 4 394 134	900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0	
AC-Nr. 4 394 136	1000	255,0-261,0	1020	800 600	272,0-278,0 270,0-276,0	100	130,0-170,0	300	19,0-25,0	
AC-Nr. 4 394 138	1050	239,0-245,0	1070	900 700	233,0-239,0 273,0-279,0	100	130,0-170,0	300	19,0-25,0	
AC-Nr. 4 394 140	1000	215,0-221,0	1020	800 600	197,0-203,0 220,0-226,0	100	130,0-170,0	300	19,0-25,0	
AC-Nr. 4 394 142	900	222,0-228,0	920	700	254,0-260,0	100	130,0-170,0	300	19,0-25,0	
AC-Nr. 4 394 144	1050	257,0-263,0	1070	750	272,0-278,0	100	130,0-170,0	300	27,0-33,0	
AC-Nr. 4 394 148	1050	295,0-303,0	1075	900	309,0-315,0	100	130,0-170,0	300	25,0	
Checking values in brackets									* 1 mm less control rod travel than col. 2	
En	AC-Nr. 4 394 150	1050	268,0-274,0	1070	900 700	274,0-280,0 280,0-286,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9
AC-Nr. 4 394 152	1050 262,0-268,0	1070	900 700	267,0-273,0 267,0-273,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 154	1050 279,0-285,0	1070	900 700	283,0-289,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 156	1050 296,0-302,0	1070	900 700	301,0-307,0 309,0-315,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 157/158	1050 253,0-256,0	1070	900 700	252,0-258,0 269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 160	1050 208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 162	900 181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 164	925 176,0-182,0	945	800 700	162,0-168,0 177,0-183,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 166	900 173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 168	925 237,0-243,0	945	800 700	251,0-257,0 269,0-275,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 170	700 218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 176	1050 213,0-219,0	1070	900 700	212,0-218,0 240,0-246,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 246	1050 211,0-220,0	1055-1075	975 700 600	237,5-247,0 258,5-269,5 255,5-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 248	700 246,0	720	600	263,0	100	130,0-170,0	300	19,0-25,0
Checking values in brackets								* 1 mm less control rod travel than col. 2
En AC-Nr. 4 394 250	1050 244,5-254,5	1060-1080			100	130,0-170,0	300	19,0-25,0

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**C. Settings for Fuel Injection Pump with Fitted Governor**

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 257	600	258,0				100	130,0-170,0	300	27,0
AC-Nr. 4 394 314	1050	246,0	1070	900 280	240,0 267,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 331	1050	241,0-247,0	1070	900 700	265,0-271,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 332	1050	263,0-274,0	1070	900 700	274,0-280,0 280,0-286,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 347	1050	269,0-275,0	1070	900 700	281,0-287,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 348	1050	234,0-240,0	1070	900 700	246,0-252,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 349	1050	208,0-214,0	1070	900 700	230,0-236,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 350	1050	262,0-268,0	1070	900 700	279,0-285,0 289,0-295,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 351	1050	253,0-256,0	1070	900 700	252,0-258,0 269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 352	1050	262,0-268,0	1070	900 700	267,0-273,0 267,0-273,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 353	1050	279,0-285,0	1070	900 700	283,0-289,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 354	1050	296,0-302,0	1070	900 700	301,0-307,0 309,0-315,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 356 Checking values in brackets	En 1050	246,0	900 700	240,0 267,0		100	130,0-170,0	300	19,0-25,0

\* 1 mm less control rod travel than col. 2

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery Idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9
AC-Nr. 4 394 386								
600	167,0-175,0	620			100	130,0-170,0	300	25,0
AC-Nr. 394 390								
900	259,0-267,0	925	700	238,0-246,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 428								
1000	188,0-196,0	1025	800	180,0-187,0	100	130,0-170,0	300	25,0
AC-Nr. 4 394 473								
850	189,0-197,0	875	750	185,0-193,0	100	130,0-170,0	325	30,0
AC-Nr. 4 394 501								
900	175,0	925	700	158,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 521								
1000	239,0-247,0	1025	700	229,0-235,0	100	130,0-170,0	300	25,0
AC-Nr. 4 394 527								
900	161,0	925	800	151,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 541								
1050	202,0-210,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 550								
1000	230,5-239,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 561								
1050	258,0	1060-80	900	256,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 564								
1050	244,0	1070	900	234,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 569								
1000	203,0-211,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 590								
1050	260,5-271,0	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 593								
1050	251,5-261,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 703								
1050	260,5-271,0	1060-1080	900	267,0-278,0	100	130,0-170,0	300	19,0-25,0
			700	267,0-278,0				
AC-Nr. 4 394 705/706								
En 1050	258,0	1060-80	900	256,0	100	130,0-170,0	300	19,0-25,0

\* 1 mm less control rod travel than col. 2

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### C. Settings for Fuel Injection Pump with Fitted Governor<sup>1)</sup>

Full-load delivery Control-rod stop Test oil temp 40°C (104°F) <sup>2)</sup>		Breakaway <sup>2b)</sup>	Fuel delivery characteristics <sup>5a)</sup> high idle speed <sup>5b)</sup>		Starting fuel delivery idle switching point <sup>6)</sup>		Low idle speed <sup>5)</sup>	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4a)	5	6	7	8	9

AC-Nr. 4 394 707	1050 244,0	1070	900	234,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 718	955 198,0-213,0	965-975	800	196,0-210,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 719	875 166,0-168,0	915	600	142,5-146,5	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 733	1000 255,0-261,0	1020	800	272,0-278,0	100	130,0-170,0	300	19,0-25,0
			600	270,0-276,0				
AC-Nr. 4 394 740/741	1020 213,0-226,0	1030-1040	915	208,0-218,0				
AC-Nr. 4 394 744	1050 250,0	1060-1080	900	256,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 745	950 208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 746	875 161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 771	800 113,0-119,0	820	600	102,0-108,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 773	800 125,0-131,0	820	600	134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 775	1025 192,0-198,0	1045	900	180,0-186,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 777	1000 200,0-206,0	1020	800	180,0-186,0	100	130,0-170,0	300	19,0-25,0
			600	189,0-195,0				
AC-Nr. 4 394 779	940 185,0-195,0	955-65			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 781	1025 230,0-236,0	1040	900	207,0-213,0	100	130,0-170,0	300	19,0-25,0
			700	209,0-215,0				
AC-Nr. 4 394 783	1000 227,0-233,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0

Checking values in brackets

<sup>1)</sup> 1 mm less control rod travel than col. 2

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 785	1000	235,0-241,0	1020	700	263,0-269,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 787	1000	220,0-226	1020	800	209,0-215,0	100	130,0-170,0	300	19,0-25,0
				600	227,0-233,0				
AC-Nr. 4 394 789	910	190,0	930			100	130,0-170,0	300	25,0
AC-Nr. 4 394 791	900	160,0-166,0	920	700	139,0-145,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 793	600	124,0-130,0	620			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 795	700	127,0-133,0	720	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 797	800	139,0-145,0	820	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 799	925	157,0-163,0	945	800	145,0-151,0	100	130,0-170,0	300	19,0-25,0
				600	134,0-140,0				
AC-Nr. 4 394 801	1000	180,0-186,0	1020	800	154,0-160,0	100	130,0-170,0	300	19,0-25,0
				700	142,0-148,0				
AC-Nr. 4 394 803	1050	207,0-213,0	1070	900	161,0-175,0	100	130,0-170,0	300	19,0-25,0
				800	147,0-153,0				
AC-Nr. 4 394 805	900	187,0-193,0	920	700	162,0-168,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 807	900	200,0-206,0	920	700	184,0-190,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 809	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 811	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 813	En 800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0

\* 1 mm less control rod travel than col. 2

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9
AC-Nr. 4 394 815	1050 222,0-228,0	1070	900 700	202,0-208,0 207,0-213,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 817	1000 240,0-246,0	1020	800 600	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 819	1050 245,0-251,0	1070	900 700	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 821	1000 217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 823	900 210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 825	1050 269,0-275,0	1070	900 700	281,0-287,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 827	1050 234,0-240,0	1070	900 700	246,0-252,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 829	1050 262,0-268,0	1070	900 700	279,0-285,0 289,0-295,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 831	1050 241,0-247,0	1070	900 700	265,0-271,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 833	900 232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 835	750 244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 837	800 239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 839	1000 212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. En4 394 841	900 288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0

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\* 1 mm less control rod travel than col. 2

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) <sup>(2)</sup>		Breakaway <sup>(2b)</sup>	Fuel delivery characteristics <sup>(5a)</sup> high idle speed <sup>(5b)</sup>		Starting fuel delivery idle switching point <sup>(6)</sup>		Low idle speed <sup>(5)</sup>	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9
AC-Nr. 4 394 843	1000 255,0-261	1020	800 600	272,0-278,0 270,0-276,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 845	1050 239,0-245,0	1070	900 700	233,0-239,0 273,0-279,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 847	1000 215,0-221,0	1020	800 600	197,0-203,0 220,0-226,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 849	900 222,0-228,0	920	700	254,0-260,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 851	1050 257,0-263,0	1070	750	272,0-278,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 853	1050 295,0-303,0	1075	900	309,0-315,0	100	130,0-170,0	300	25,0
AC-Nr. 4 394 857	1050 262,0-268,0	1070	900 700	267,0-273,0 267,0-273,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 861	1050 296,0-302,0	1070	900 700	301,0-307,0 309,0-315,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 863	1050 253,0-256,0	1070	900 700	252,0-258,0 269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 865	1050 208,0-214,0	1070	900 700	230,0-236,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 867	900 181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 869	925 176,0-182,0	945	800 700	162,0-168,0 177,0-183,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 871	900 173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 873	925 237,0-243,0	945	800 700	251,0-257,0 269,0-275,0	100	130,0-170,0	300	27,0-33,0

En <sup>Checking values in brackets</sup>

\* 1 mm less control rod travel than col. 2

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# C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 875	700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 877	1050	213,0-219,0	1060-1080	900	212,0-218,0	100	130,0-170,0	300	19,0-25,0
				700	240,0-246,0				
AC-Nr. 4 394 879	1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	300	19,0-25,0
				700	258,5-269,5				
				600	255,5-266,0				
AC-Nr. 4 394 881	700	246,0	720	600	263,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 883	1050	244,5	1060-1080		254,5	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 885	600	258,0				100	130,0-170,0	300	27,0
AC-Nr. 4 394 891	600	167,0-175,0	620			100	130,0-170,0	300	25,0
AC-Nr. 4 394 893	900	259,0-267,0	925	700	238,0-246,0	100	130,0-170,0	300	19,0-29,0
AC-Nr. 4 394 895	1000	188,0-196,0	1025	800	180,0-187,0	100	130,0-170,0	300	25,0
AC-Nr. 4 394 897	850	189,0-197,0	875	750	185,0-193,0	100	130,0-170,0	325	30,0
AC-Nr. 4 394 890	900	175,0	925	700	158,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 905	1000	239,0-247,0	1025	700	229,0-235,0	100	130,0-170,0	300	25,0
AC-Nr. 4 394 907	900	161,0	925	800	151,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 909	1050	202,0-210,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 911	1000	230,5-239,5	1010-1030			100	130,0-170,0	300	19,0-25,0
		Checking values in brackets							* 1 mm less control rod travel than col. 2
En AC-Nr. 4 394 915	1000	203,0-211,5	1010-1030			100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Brezkaway (2b)	Fuel delivery characteristics high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min (1)	cm <sup>3</sup> /1000 strokes (2)	rev/min (4a)	rev/min (4)	cm <sup>3</sup> /1000 strokes (5)	rev/min (6)	cm <sup>3</sup> /1000 strokes (7)	rev/min (8)	Control rod travel mm (9)
AC-Nr. 4 394 917								
1050	260,5-271,0	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 919								
1050	215,5-261,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 921								
1050	260,5-271,0	1060-1080	900	267,0-278,0	100	130,0-170,0	300	19,0-25,0
			700	267,0-278,0				
AC-Nr. 4 394 925								
1050	244,0	1070	900	234,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 997								
900	173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0

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Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

# Test Specifications Fuel Injection Pumps ① and Governors

En

PE 6 P 120/420 LS 152 RQV 300-1025 PA 112 KR  
 0 401 846 180  
 1 - 5 - 3 - 6 - 2 - 4 (60°)  
 Calibrating nozzle-and-holder assembly 0 681 443 022  
 Test-pressure line 9 681 230 703

supersedes  
 company Allis-Chalmers  
 engine 16000-2500

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,80+0,1 mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	12	26,4-27,1	1,0			
600	6	8,6- 9,1				
	12	26,3-28,2				
200	15	33,8-36,2				
	6	4,2- 5,2				

Adjust the fuel delivery from each outlet according to the values in

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## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm 6	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm 9	rev/min 10	mm 11
66°	1050	15 - 18				10°	250	6,4-8,0		
	1100	10,7- 15					350	3,0-5,2		
	1150	6,0-11,6					450	1,3-2,8		
	1210	0,7					550	0		
	1300	0								

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ②b	Fuel delivery characteristics high idle speed ⑤b		Starting fuel delivery idle switching point ⑥		Torque-control travel ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

Checking values in brackets

\* 1 mm less control rod travel than col. 2



**C. Settings for Fuel Injection Pump with Fitted Governor**

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min (4a)	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 392 715

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 392 717

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 719

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 392 721

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

AC-Nr. 4 392 723

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 725

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 727

900 232,0-238,0 920 700 253,0-259 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 729

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 731

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 392 735

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 392 737

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 392 739

1050 207,0-213,0 1070 900 195,0-201,0 100 130,0-170,0 300 19,0-25,0  
700 225,0-231,0

AC-Nr. 4 392 741

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0  
700 230,0-236,0

AC-Nr. 4 392 743

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 19,0-25,0  
700 243,0-249,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 392 747								
1050	227,0-233,0	1070	900	208,0-214,0	100	130,0-170,0	300	19,0-25,0
			700	247,0-253,0				
AC-Nr. 4 392 749								
1050	230,0-234,0	1070			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 750								
1050	230,0-234,0	1070			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 768								
800	123,0-133,0	820	600	132,0-142,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 775/..776								
875	162,0-164,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 777								
950	205,0-207,0	970	700	195,0-199,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 778								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 392 779								
1025	190,0-200,0	1030-40	1000	191,0-201,0	100	130,0-170,0	300	19,0-25,0
			900	178,0-188,0				
AC-Nr. 4 392 781								
1025	228,0-238,0	1050-60	900	205,0-215,0	100	130,0-170,0	300	19,0-25,0
			700	207,0-217,0				
AC-Nr. 4 392 953								
940	185,0-195,0	955-65			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 095								
1050	211,0-221,0	1060-80	900	210,0-220,0	100	130,0-170,0	300	19,0-25,0
			700	238,0-248,0				
AC-Nr. 4 393 307								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 393 431								
1050	208,0-214,0	1070	900	230,0-235,0	100	130,0-170,0	300	19,0-25,0
			700	260,0-266,0				
AC-Nr. 4 393 821								
1050	242,0-248,0	1070	900	220,0-226,0	100	130,0-170,0	300	19,0-25,0
			700	230,0-236,0				

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 393 823	1050 187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 825	1050 224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 827	1050 200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 829	1050 230,0-234,0	1070			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 831	1050 213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0		
AC-Nr. 4 393 833	1050 264,0	1060-1080	900	280,5	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 835	1050 220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 837	1050 227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 890	950 208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 393 891	955 208,0	965-975	895	203,0				
AC-Nr. 4 393 961	900 181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 001	700 218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 017	950 208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 020	700 249,0-257,0	725	600	258,0-264,0	100	130,0-170,0	300	19,0-29,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle/ switching point (6)		Low idle speed (3)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 393 890								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 393 891								
955	208,0	965-975	895	203,0				
AC-Nr. 4 393 961								
900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 001								
700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 017								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 020								
700	249,0-257,0	725	600	258,0-264,0	100	130,0-170,0	300	19,0-29,0
AC-Nr. 4 394 062								
800	113,0-119,0	820	600	102,0-108,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 064								
375	161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 066								
800	125,0-131,0	820	600	134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 068								
1025	192,0-198,0	1045	900	180,0-186,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 070								
1000	200,0-206,0	1020	800	180,0-186,0	100	130,0-170,0	300	19,0-25,0
			600	189,0-195,0				
AC-Nr. 4 394 072								
940	185,0-195,0	955-65			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 074								
1025	230,0-236,0	1040	900	207,0-213,0	100	130,0-170,0	300	19,0-25,0
			700	209,0-215,0				
AC-Nr. 4 394 076								
1000	227,0-233,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 078								
1000	235,0-241,0	1020	700	263,0-269,0	100	130,0-170,0	300	19,0-25,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 080	1000	220,0-226,0	1020	800 600	209,0-215,0 227,0-233,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 082	910	190,0	930			100	130,0-170,0	300	25,0
AC-Nr. 4 394 084	900	160,0-166,0	920	700	139,0-145,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 086	600	124,0-130,0	620			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 088	700	127,0-133,0	720	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 090	800	139,0-145,0	820	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 092	925	157,0-163,0	945	800 600	145,0-151,0 134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 094	1000	180,0-186,0	1020	800 700	154,0-160,0 142,0-148,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 096	1050	207,0-213,0	1070	900 800	161,0-175,0 147,0-153,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 098	900	187,0-193,0	920	700	162,0-168,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 100	900	200,0-206,0	920	700	184,0-190,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 102	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 104	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 106	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 108 Checking values in brackets	En 1050	222,0-228,0	1070	900 700	202,0-208,0 207,0-213,0	100	130,0-170,0	300	19,0-25,0

\* 1 mm less control rod travel than col. 2

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) <sup>(2)</sup>		Breakaway <sup>(2b)</sup>	Fuel delivery characteristics <sup>(5a)</sup> high idle speed <sup>(5b)</sup>		Starting fuel delivery idle switching point <sup>(6)</sup>		Low idle speed <sup>(5)</sup>	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9
AC-Nr. 4 394 110								
1000	240,0-246,0	1020	800	224,0-230,0	100	130,0-170,0	300	19,0-25,0
			600	237,0-243,0				
AC-Nr. 4 394 112								
1050	245,0-251,0	1070	900	224,0-230,0	100	130,0-170,0	300	19,0-25,0
			700	237,0-243,0				
AC-Nr. 4 394 114								
1000	217,0-223,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
			600	219,0-225,0				
AC-Nr. 4 394 116								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 118								
1050	269,0-275,0	1070	900	281,0-287,0	100	130,0-170,0	300	19,0-25,0
			700	293,0-299,0				
AC-Nr. 4 394 120								
1050	234,0-240,0	1070	900	246,0-252,0	100	130,0-170,0	300	19,0-25,0
			700	268,0-274,0				
AC-Nr. 4 394 122								
1050	262,0-268,0	1070	900	279,0-285,0	100	130,0-170,0	300	19,0-25,0
			700	289,0-295,0				
AC-Nr. 4 394 124								
1050	241,0-247,0	1070	900	265,0-271,0	100	130,0-170,0	300	19,0-25,0
			700	268,0-274,0				
AC-Nr. 4 394 126								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 128								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 130								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 132								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 134								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 136								
1000	255,0-261,0	1020	800	272,0-278,0	100	130,0-170,0	300	19,0-25,0
			600	270,0-276,0				

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 138	1050	239,0-245,0	1070	900	233,0-239,0	700	273,0-279,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 140	1000	215,0-221,0	1020	800	197,0-203,0	600	220,0-226,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 142	900	222,0-228,0	920	700	254,0-260,0	100	130,0-170,0	300	19,0-25,0		
AC-Nr. 4 394 144	1050	257,0-263,0	1070	750	272,0-278,0	100	130,0-170,0	300	27,0-33,0		
AC-Nr. 4 394 148	1050	295,0-303,0	1075	900	309,0-315,0	100	130,0-170,0	300	25,0		
AC-Nr. 4 394 150	1050	268,0-274,0	1070	900	274,0-280,0	700	280,0-286,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 152	1050	262,0-268,0	1070	900	267,0-273,0	700	267,0-273,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 154	1050	279,0-285,0	1070	900	283,0-289,0	700	293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 156	1050	296,0-302,0	1070	900	301,0-307,0	700	309,0-315,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 157/158	1050	253,0-256,0	1070	900	252,0-258,0	700	269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 160	1050	208,0-214,0	1070	900	230,0-235,0	700	260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 162	900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0		
AC-Nr. 4 394 164	925	176,0-182,0	945	800	162,0-168,0	700	177,0-183,0	100	130,0-170,0	300	19,0-25,0

Checking values in brackets

En AC-Nr. 4 394 166

900	173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0
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\* 1 mm less control rod travel than col. 2

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min (4a)	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 168	925	237,0-243,0	945	800 700	251,0-257,0 269,0-275,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 170	700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 176	1050	213,0-219,0	1070	900 700	212,0-218,0 240,0-248,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 246	1050	211,0-220,0	1055-1075	975 700 600	237,5-247,0 258,5-269,5 255,5-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 248	700	246,0	720	600	263,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 250	1050	244,5-254,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 257	600	258,0				100	130,0-170,0	300	27,0
AC-Nr. 4 394 314	1050	246,0	1070	900 700	240,0 267,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 331	1050	241,0-247,0	1070	900 700	265,0-271,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 332	1050	268,0-274,0	1070	900 700	274,0-280,0 280,0-286,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 347	1050	269,0-275,0	1070	900 700	281,0-287,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 348	1050	234,0-240,0	1070	900 700	246,0-252,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 349	1050	208,0-214,0	1070	900 700	230,0-236,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

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**C. Settings for Fuel Injection Pump with Fitted Governor**

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 350	1050	262,0-268,0	1070	900 700	279,0-285,0 289,0-295,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 351	1050	253,0-256,0	1070	900 700	252,0-258,0 269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 352	1050	262,0-268,0	1070	900 700	267,0-273,0 267,0-273,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 353	1050	279,0-285,0	1070	900 700	283,0-289,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 354	1050	296,0-302,0	1070	900 700	301,0-307,0 309,0-315,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 356	1050	246,0	1070	900 700	240,0 267,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 386	600	167,0-175,0				100	130,0-170,0	300	25,0
AC-Nr. 4 394 390	900	259,0-267,0	925	700	238,0-246,0	100	130,0-170,0	300	19,0-29,0
AC-Nr. 4 394 428	1000	188,0-196,0	1025	800	180,0-187,0	100	130,0-170,0	300	25,0
AC-Nr. 4 394 473	850	189,0-197,0	875	750	185,0-193,0	100	130,0-170,0	325	30,0
AC-Nr. 4 394 501	900	175,0	925	700	158,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 521	1000	239,0-247,0	1025	700	229,0-235,0	100	130,0-170,0	300	25,0
AC-Nr. 4 394 527	900	161,0	925	800	151,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 541	1050	202,0-210,5	1060-1080			100	130,0-170,0	300	19,0-25,0
En AC-Nr. 4 394 550	1000	230,5-239,5	1010-1030			100	130,0-170,0	300	19,0-25,0

Checking values in brackets

\* 1 mm less control rod travel than col 2

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**C. Settings for Fuel Injection Pump with Fitted Governor**

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 561	1050 258,0	1060-80	900	256,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 564	1050 244,0	1070	900	234,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 569	1000 203,0-211,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 590	1050 260,5-271,0	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 593	1050 251,5-261,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 703	1050 260,5-271,0	1060-1080	900	267,0-278,0	100	130,0-170,0	300	19,0-25,0
			700	267,0-278,0				
AC-Nr. 4 394 705/706	1050 258,0	1060-80	900	256,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 707	1050 244,0	1070	900	234,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 718	955 198,0-213,0	965-975	800	196,0-210,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 719	875 166,0-168,0	915	600	142,5-146,5	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 733	1000 255,0-261,0	1020	800	272,0-278,0	100	130,0-170,0	300	19,0-25,0
			600	270,0-276,0				
AC-Nr. 4 394 740/741	1020 213,0-226,0	1030-1040	915	208,0-218,0				
AC-Nr. 4 394 744	1050 258,0	1060-1080	900	256,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 745	950 208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 746	875 161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
En AC-Nr. 4 394 771	800 113,0-119,0	820	600	102,0-108,0	100	130,0-170,0	300	19,0-25,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 773

800 125,0-131,0 820 600 134,0-140,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 775

1025 192,0-198,0 1045 900 180,0-186,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 777

1000 200,0-206,0 1020 800 180,0-186,0 100 130,0-170,0 300 19,0-25,0  
600 189,0-195,0

AC-Nr. 4 394 779

940 185,0-195,0 955-65 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 781

1025 230,0-236,0 1040 900 207,0-213,0 100 130,0-170,0 300 19,0-25,0  
700 209,0-215,0

AC-Nr. 4 394 783

1000 227,0-233,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 785

1000 235,0-241,0 1020 700 263,0-269,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 787

1000 220,0-226,0 1020 800 209,0-215,0 100 130,0-170,0 300 19,0-25,0  
600 227,0-233,0

AC-Nr. 4 394 789

910 190,0 930 100 130,-170,0 300 25,0

AC-Nr. 4 394 791

900 160,0-166,0 920 700 139,0-145,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 793

600 124,0-130,0 620 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 795

700 127,0-133,0 720 600 124,0-130,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 797

800 139,0-145,0 820 600 124,0-130,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 799

925 157,0-163,0 945 800 145,0-151,0 100 130,0-170,0 300 19,0-25,0  
600 134,0-140,0

AC-Nr. 4 394 801  
Checking values in brackets

En 1000 180,0-186,0 1020 800 154,0-160,0 100 130,0-170,0 300 19,0-25,0  
700 142,0-148,0

\* 1 mm less control rod travel than col. 2

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 799

925 157,0-163,0 945 800 145,0-151,0 100 130,0-170,0 300 19,0-25,0  
600 134,0-140,0

1000 180,0-186,0 1020 800 154,0-160,0 100 130,0-170,0 300 19,0-25,0  
700 142,0-148,0

AC-Nr. 4 394 803

1050 207,0-213,0 1070 900 161,0-175,0 100 130,0-170,0 300 19,0-25,0  
800 147,0-153,0

AC-Nr. 4 394 805

900 187,0-193,0 920 700 162,0-168,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 807

900 200,0-206,0 920 700 184,0-190,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 809

900 203,0-209,0 920 700 209,0-215,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 811

750 185,0-191,0 770 600 222,0-228 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0 820 600 223,0-229,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0 1070 900 202,0-208,0 100 130,0-170,0 300 19,0-25,0  
700 207,0-213,0

AC-Nr. 4 394 817

1000 240,0-246,0 1020 800 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
600 237,0-243,0

AC-Nr. 4 394 819

1050 245,0-251,0 1070 900 224,0-230,0 100 130,0-170,0 300 19,0-25,0  
700 237,0-243,0

AC-Nr. 4 394 821

1000 217,0-223,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 219,0-225,0

AC-Nr. 4 394 823

900 210,0-216,0 920 700 212,0-218,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0 1070 900 281,0-287,0 100 130,0-170,0 300 19,0-25,0  
700 293,0-299,0

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

AC-Nr. 4 394 827

1050 234,0-240,0 1070 900 246,0-252,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 829	1050 262,0-268,0	1070	900 279,0-285,0 700 289,0-295,0	100 130,0-170,0	300 19,0-25,0			
AC-Nr. 4 394 831	1050 241,0-247,0	1070	900 265,0-271,0 700 268,0-274,0	100 130,0-170,0	300 19,0-25,0			
AC-Nr. 4 394 833	900 232,0-238,0	920	700 253,0-259,0	100 130,0-170,0	300 19,0-25,0			
AC-Nr. 4 394 835	750 244,0-250,0	770	700 253,0-259,0	100 130,0-170,0	300 19,0-25,0			
AC-Nr. 4 394 837	800 239,0-245,0	820	600 248,0-254,0	100 130,0-170,0	300 19,0-25,0			
AC-Nr. 4 394 839	1000 212,0-218,0	1020	800 230,0-236,0	100 130,0-170,0	300 19,0-25,0			
AC-Nr. 4 394 841	900 288,0-294,0	920	700 287,0-293,0	100 130,0-170,0	300 27,0-33,0			
AC-Nr. 4 394 843	1000 255,0-261,0	1020	800 272,0-278,0 600 270,0-276,0	100 130,0-170,0	300 19,0-25,0			
AC-Nr. 4 394 845	1050 239,0-245,0	1070	900 233,0-239,0 700 273,0-279,0	100 130,0-170,0	300 19,0-25,0			
AC-Nr. 4 394 847	1000 215,0-221,0	1020	800 197,0-203,0 600 220,0-226,0	100 130,0-170,0	300 19,0-25,0			
AC-Nr. 4 394 849	900 222,0-228,0	920	700 254,0-260,0	100 130,0-170,0	300 19,0-25,0			
AC-Nr. 4 394 851	1050 257,0-263,0	1070	750 272,0-278,0	100 130,0-170,0	300 27,0-33,0			
AC-Nr. 4 394 853	1050 295,0-303,0	1075	900 309,0-315,0	100 130,0-170,0	300 25,0			
AC-Nr. 4 394 857	1050 262,0-268,0	1070	900 267,0-273,0 700 267,0-273,0	100 130,0-170,0	300 19,0-25,0			

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

AC-Nr. 4 394 861	1050 296,0-302,0	1070	900 301,0-307,0 700 309,0-315,0	100 130,0-170,0	300 19,0-25,0			
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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 863	1050	253,0-256,0	1070	900 700	252,0-258,0 269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 865	1050	208,0-214,0	1070	900 700	230,0-236,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 867	900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 869	925	176,0-182,0	945	800 700	162,0-168,0 177,0-183,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 871	900	173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 873	925	237,0-243,0	945	800 700	251,0-257,0 269,0-275,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 875	700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 877	1050	213,0-219,0	1060-1080	900 700	212,0-218,0 240,0-246,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 879	1050	211,0-220,0	1055-1075	975 700 600	237,5-247,0 258,5-269,5 255,5-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 881	700	246,0	720	600	263,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 883	1050	244,5	1060-1080		254,5	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 885	600	258,0				100	130,0-170,0	300	27,0
AC-Nr. 4 394 891	600	167,0-175,0	620			100	130,0-170,0	300	25,0
AC-Nr. 4 394 893 Checking values in brackets	En 900	259,0-267,0	925	700	238,0-246,0	100	130,0-170,0	300	19,0-29,0

\* 1 mm less control rod travel than col. 2

**Testoil-ISO 4113**

D5

DS



### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp 40°C (104°F) (2)		Breakaway (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 895	1000	188,0-196,0	1025	800	180,0-187,0	100	130,0-170,0	300	25,0
AC-Nr. 4 394 897	850	189,0-197,0	875	750	185,0-193,0	100	130,0-170,0	325	30,0
AC-Nr. 4 394 899	900	175,0	925	700	158,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 905	1000	239,0-247,0	1025	700	229,0-235,0	100	130,0-170,0	300	25,0
AC-Nr. 4 394 907	900	161,0	925	800	151,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 909	1050	202,0-210,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 911	1000	230,5-239,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 915	1000	203,0-211,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 917	1050	260,5-271,0	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 919	1050	215,5-261,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 921	1050	260,5-271,0	1060-1080	900	267,0-278,0	100	130,0-170,0	300	19,0-25,0
				700	267,0-278,0				
AC-Nr. 4 394 925	1050	244,0	1070	900	234,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 997	900	173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0

**Testoil-ISO 4113**

Checking values in brackets

\* 1 mm less control rod travel than col. 2

En

BOSCH TEST SPECS. IP ASSEMBLY  
 Pump: PE 8 P 120 A 920/4 LS 7149  
 Regulator: RE 30

TEST SHEET: SCA 14.2 k  
 Edition: 05. 12. 89 (2)  
 Type number: 0 412 628 826  
 Type number: 0 421 890 007  
 CUSTOMER IDENT. NO.: -- --

IP ASSEMBLY 0 402 698 802

Customer-specific details  
 Customer: Scania  
 Engine: DSC 1404  
 Output kW: 347  
 at 1/min: 1900

		Min	Max
PC mark	Cyl. No.		1
Pulse wheel position (PC cam)	°CS		0 of CS CYL1
Tolerance	+/-°CS		0.2
P Tolerance	+/-°CS		0.5

TEST PREREQUISITES

Test oil inlet temperature	°C	38	42
Overflow valve		1 417 413 025	
Inlet pressure	bar	1.5	
Overflow	l/h	100	120
Calibrating nozzle-holder assembly		1 688 901 019	
Opening pressure	bar	207	210
Perforated plate diameter	mm	0.8	
Test pressure line		1 680 750 015	
Dimensions:			
Outer diameter	mm	6.00	
x wall thickness	mm	1.50	
x length	mm	600	

Section B -

Actuator test  
 - Check values denoted by "P"  
 - Assembly warm-up time: 3 mins. at n = 600 1/min, U/Norm = 2.5 V

CONTROL-ROD PICKUP SETTING

Test speed	1/min	0	
Setting value			
U/Norm	V	3.10	
Control-rod travel	mm	12.95	13.05
P Control-rod travel	mm	12.90	13.10
Check value			
U/Norm	V	1.70	
Control-rod travel	mm	5.90	6.40
P Control-rod travel	mm	5.85	6.45
Stop position			
U/Norm	V	min.	
Control-rod travel	mm	0.5	1.0
P Control-rod travel	mm	0.4	1.1

TEST SPECIFICATIONS

Section A -  
 Setting values of injection pump  
 - Check values denoted by "P"  
 - No basic setting. Equal delivery setting under Section C

PORT CLOSING

PC setting cyl.		1	
Test pressure	bar	25	27
Prestroke (from BDC)	mm	5.0	5.1
Prestroke (from BDC)	mm	4,95	5.15
Control-rod travel	mm	9.0	12.0
Cam sequence		1 - 2 - 7 -	
		3 - 4 - 5 -	
		6 - 8	
PC difference	°CS	45 each	
tolerance	+/-°CS	0.50	
tolerance	+/-°CS	0.75	

SPEED SENSOR SIGNALS

- Test with control rod in stop position

Speed	1/min	60	
pos.amplitude	V	0.8	2.0
P pos.amplitude	V	0.6	3.0
Speed	1/min	600	
Difference			
Amplitude to amplitude	V	max. 1.4	

Continued on next page

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Min Max  
-----

S e c t i o n C -

Injection pump with actuator

- Check values denoted by "P"

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FUEL DELIVERY TEST AND SETTING

Test point V 1

Speed	1/min	700	
U/Norm	V	3.18	
Fuel delivery	cm3/1000str	226.0	228.0
P Fuel delivery	cm3/1000str	223.0	231.0
Dispersion	cm3/1000str	6.0	
P Dispersion	cm3/1000str	9.0	

Test point L1

Speed	1/min	225	
U/Norm	V	1.6	
Fuel delivery	cm3/1000str	16.0	20.0
P Fuel delivery	cm3/1000str	13.0	23.0
Dispersion	cm3/1000str	3.0	
P Dispersion	cm3/1000str	6.0	

---

## BOSCH INJECTION PUMP TEST SPECIFICATIONS

Observe notes in remark column

Test sheet : PEU 2.5 F  
Date of manufacture :  
Edition : 10.12.1991  
Replaces : 05.07.1989  
Test oil : ISO 4113

Injection pump : VE4/9E2075 R 190

Type No. : 0 460 494 999  
Customer Ident. No. :

### Customer-specific details

Customer : Peugeot

Engine : XD 3 T

Output KW : 77  
Speed 1/min : 4150

### TEST BENCH PREREQUISITES

Test oil  
return temp. > °C  
with thermometer> : 40...48  
electronic> : 42...50

Inlet pressure, bar : 0.30...0.40

Calibrating nozzle-  
holder assembly> : 1 688 901 022

Opening  
pressure> bar : 130...133

Test pressure line : 1 680 750 073

Outer diameter : 6.00  
x wall thickness> : 2.00  
x length> mm : 450

Overflow valve : 1 463 456 303

Test line : 1 684 463 218  
(fuel-delivery actuator)

Test line : 1 684 463 221  
(solenoid valve  
start of injection)

## ELECTRICAL TEST

Actuator  
Connections 4 and 7  
Test temperature:  
15°...30°C, ohms : 0.4...1.0  
50°...70°C, ohms : 0.45...1.1

Connection 4 and  
ground, Mohms min.: 1.0  
Connection 7 and  
ground, Mohms min.: 1.0  
Connection 2 and 7  
Mohms min. : 1.0  
Connection 4 and 6  
Mohms min. : 1.0

Control-collar travel sensor  
Test temperature :  
15°...70°C  
Connections 2 and 3  
kohms : 1.0...3.0  
Connections 1 and 3  
kohms : 0.5...2.0

Connection 1 and  
ground, Mohms min.: 1.0  
Connection 2 and  
ground, Mohms min.: 1.0  
Connection 3 and  
ground, Mohms min.: 1.0

Temperature sensor, fuel  
Connections 5 and 6  
Test temperature :  
15°...30°C, kohms : 1.2...4.0  
50°...70°C, kohms : 0.3...1.2

Connection 5 and  
ground, Mohms min.: 1.0  
Connection 6 and  
ground, Mohms min.: 1.0

Solenoid valve, start of  
injection  
Connections 1 and 2  
Test temperature :  
15°...30°C, ohms : 14.3...17.3  
50°...70°C, ohms : 15.5...21.0

Setting values of injection pump  
Check values in brackets

Supply pump pressure:

Speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Setting value, bar: 6.0...6.6  
Solenoid valve  
Start of  
injection, volts : 0

Timing device travel:

Speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Setting value, mm : 8.5...8.9  
Solenoid valve  
Start of  
injection, volts : 0

Full-load delivery:

Speed 1/min : 1500  
Checkbk. volt. mV : 2750  
Fuel delivery cm3/  
> 1000str: 37.2...38.2  
Solenoid valve  
Start of  
injection, volts : 0  
Dispersion cm3/  
> 1000str: 2.5

Test specifications of injection pump  
Check values in brackets

Supply pump pressure variations:

1st speed 1/min : 300  
Checkbk. volt. mV : 3000  
Supply pump  
pressure > bar : 4.8...5.4  
> bar : (4.6...5.6)  
Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Supply pump  
pressure > bar :  
> bar : (5.8...6.8)  
Solenoid valve  
Start of  
injection, volts : 0

Timing device variations:

1st speed 1/min : 100  
Checkbk. volt. mV : 4000  
Timing device  
travel mm : 1.9...4.7  
> mm : (1.6...5.0)  
Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 1000  
Checkbk. volt. mV : 2300  
Timing device  
travel mm : 0.0...0.6  
> mm : (0.0...0.6)  
Solenoid valve  
Start of  
injection, volts : 12  
3rd speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Timing device  
travel mm :  
> mm : (8.0...9.4)  
Solenoid valve  
Start of  
injection, volts : 0  
4th speed 1/min : 2000  
Checkbk. volt. mV : 3000  
Timing device  
travel mm : 12.0...12.6  
> mm : (11.8...12.8)  
Solenoid valve  
Start of  
injection, volts : 0

Overflow at overflow valve

1st speed 1/min : 2000  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Overflow : 84...168  
> cm3/10: (84...168)

Fuel delivery variations:

1st speed 1/min : 2000  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 50.5...52.5  
> 1000str: (49.0...54.0)  
Dispersion cm3/: 2.5  
> 1000str: (2.5)  
2nd speed 1/min : 1500  
Checkbk. volt. mV : 2750  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/:  
> 1000str: (35.7...39.7)  
Dispersion cm3/:  
> 1000str: (2.5)  
3rd speed 1/min : 1500  
Checkbk. volt. mV : 2000  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 8.9...10.9  
> 1000str: (7.4...12.4)  
4th speed 1/min : 500  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/: 36.2...38.2  
> 1000str: (34.7...42.7)

Idle delivery:

Speed 1/min : 375  
Checkbk. volt. mV : 2500  
Fuel delivery cm3/:  
> 1000str: (6.1...14.1)  
Solenoid valve  
Start of  
injection, volts : 12  
Dispersion cm3/:  
> 1000str: (2.5)

Starting fuel delivery:

Speed 1/min : 100  
Checkbk. volt. mV : 4000  
Fuel delivery min.:  
> cm3/1000str: 45.0  
Solenoid valve  
Start of  
injection, volts : 12

Stop test:

Speed 1/min : 2075  
Checkbk. volt. mV : 3000  
ELAB, volts : 0  
Fuel delivery cm3/:  
max. 1000str: 4.0

Shutoff solenoid:

Cut-in voltage  
min.> volts : 10.0  
Rated voltage,  
volts: 12.0

## BOSCH INJECTION PUMP TEST SPECIFICATIONS

Observe notes in remark column

Test sheet : CIT 2.5 A  
Date of manufacture :  
Edition : 10.12.1991  
Replaces : 05.07.1989  
Test oil : ISO 4113

Injection pump : VE4/9E2075 R 220

Type No. : 0 460 494 998  
Customer Ident. No. :

Customer-specific details  
Customer : Citroen

Engine : M 25-671

Output KW : 78  
Speed 1/min : 4150

### TEST BENCH PREREQUISITES

Test oil  
return temp. > °C  
with thermometer > : 40...48  
electronic > : 42...50

Inlet pressure, bar : 0.30...0.40

Calibrating nozzle-  
holder assembly > : 1 688 901 022

Opening  
pressure > bar : 130...133

Test pressure line : 1 680 750 073

Outer diameter : 6.00  
x wall thickness > : 2.00  
x length > mm : 450

Overflow valve : 1 463 456 303

Test line : 1 684 463 218  
(fuel-delivery actuator)

Test line : 1 684 463 221  
(solenoid valve  
start of injection)

Port closing  
Prestroke mm : 0.5  
> (from BDC): +/-0.02

## ELECTRICAL TEST

Actuator  
Connections 4 and 7  
Test temperature:  
15°...30°C, ohms : 0.4...1.0  
50°...70°C, ohms : 0.45...1.1

Connection 4 and  
ground, Mohms min.: 1.0  
Connection 7 and  
ground, Mohms min.: 1.0  
Connection 2 and 7  
Mohms min. : 1.0  
Connection 4 and 6  
Mohms min. : 1.0

Control-collar travel sensor  
Test temperature :  
15°...70°C  
Connections 2 and 3  
kohms : 1.0...3.0  
Connections 1 and 3  
kohms : 0.5...2.0

Connection 1 and  
ground, Mohms min.: 1.0  
Connection 2 and  
ground, Mohms min.: 1.0  
Connection 3 and  
ground, Mohms min.: 1.0

Temperature sensor, fuel  
Connections 5 and 6  
Test temperature :  
15°...30°C, kohms : 1.2...4.0  
50°...70°C, kohms : 0.3...1.2

Connection 5 and  
ground, Mohms min.: 1.0  
Connection 6 and  
ground, Mohms min.: 1.0

Solenoid valve, start of  
injection  
Connections 1 and 2  
Test temperature :  
15°...30°C, ohms : 14.3...17.3  
50°...70°C, ohms : 15.5...21.0



Setting values of injection pump  
Check values in brackets

Supply pump pressure:

Speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Setting value, bar: 6.0...6.6  
Solenoid valve  
Start of  
injection, volts : 0

Timing device travel:

Speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Setting value, mm : 8.6...9.0  
Solenoid valve  
Start of  
injection, volts : 0

Full-load delivery:

Speed 1/min : 1500  
Checkbk. volt. mV : 2750  
Fuel delivery cm3/  
> 1000str: 37.3...38.3  
Solenoid valve  
Start of  
injection, volts : 0  
Dispersion cm3/  
> 1000str:

Test specifications of injection pump  
Check values in brackets

Supply pump pressure variations:

1st speed 1/min : 300  
Checkbk. volt. mV : 3000  
Supply pump  
pressure > bar : 4.8...5.4  
> bar : (4.6...5.6)  
Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Supply pump  
pressure > bar :  
> bar : (5.8...6.8)  
Solenoid valve  
Start of  
injection, volts : 0

Timing device variations:

1st speed 1/min : 100  
Checkbk. volt. mV : 4000  
Timing device  
travel mm : 2.2...5.0  
> mm : (1.9...5.3)  
Solenoid valve  
Start of  
injection, volts : 0  
2nd speed 1/min : 1000  
Checkbk. volt. mV : 2300  
Timing device  
travel mm : 0.0...0.6  
> mm : (0.0...0.6)  
Solenoid valve  
Start of  
injection, volts : 12  
3rd speed 1/min : 1000  
Checkbk. volt. mV : 3000  
Timing device  
travel mm :  
> mm : (8.1...9.5)  
Solenoid valve  
Start of  
injection, volts : 0  
4th speed 1/min : 2000  
Checkbk. volt. mV : 3000  
Timing device  
travel mm : 12.0...12.6  
> mm : (11.8...12.8)  
Solenoid valve  
Start of  
injection, volts : 0

Overflow at overflow valve

1st speed 1/min : 2000  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Overflow : 84...168  
> cm3/10: (84...168)

Fuel delivery variations:

1st speed 1/min : 2000  
 Checkbk. volt. mV : 3000  
 Solenoid valve  
 Start of  
 injection, volts : 0  
 Fuel delivery cm3/: 50.8...52.8  
 > 1000str: (49.3...54.3)  
 Dispersion cm3/: 2.5  
 > 1000str: (2.5)  
 2nd speed 1/min : 1500  
 Checkbk. volt. mV : 2750  
 Solenoid valve  
 Start of  
 injection, volts : 0  
 Fuel delivery cm3/:  
 > 1000str: (37.0...38.6)  
 Dispersion cm3/:  
 > 1000str: (2.5)  
 3rd speed 1/min : 1500  
 Checkbk. volt. mV : 2000  
 Solenoid valve  
 Start of  
 injection, volts : 0  
 Fuel delivery cm3/: 10.5...12.5  
 > 1000str: (10.0...13.0)  
 4th speed 1/min : 500  
 Checkbk. volt. mV : 3000  
 Solenoid valve  
 Start of  
 injection, volts : 0  
 Fuel delivery cm3/: 38.0...40.0  
 > 1000str: (37.5...40.5)

Idle delivery:

Speed 1/min : 375  
 Checkbk. volt. mV : 2400  
 Fuel delivery cm3/:  
 > 1000str: (7.4...15.4)  
 Solenoid valve  
 Start of  
 injection, volts : 12  
 Dispersion cm3/:  
 > 1000str: (2.5)

Starting fuel delivery:

Speed 1/min : 100  
 Checkbk. volt. mV : 4000  
 Fuel delivery min.:  
 > cm3/1000str: 45.0  
 Solenoid valve  
 Start of  
 injection, volts : 12

Stop test:

Speed 1/min : 2075  
 Checkbk. volt. mV : 3000  
 ELAB, volts : 0  
 Fuel delivery cm3/:  
 max. 1000str: 5.0

Shutoff solenoid:

Cut-in voltage  
 min.> volts : 10.0  
 Rated voltage,  
 volts: 12.0

Dimensions for mounting and setting:

Description		
K	mm	:
KF	mm	: 5.4...5.7
SVS max.	mm	:
FH	mm	:

## BOSCH INJECTION PUMP TEST SPECIFICATIONS

Observe notes in remark column

Test sheet : BMW 2.4 G  
Date of manufacture :  
Edition : 10.12.1991  
Replaces : 05.07.1989  
Test oil : ISO 4113

Injection pump : VE6/10E2400 R 260

Type No. : 0 460 406 998  
Customer Ident. No. :

Customer-specific details  
Customer : BMW

Engine : M 21 D 24 WA

Output KW : 85  
Speed 1/min : 4800

### TEST BENCH PREREQUISITES

Test oil  
return temp. > °C  
with thermometer> : 40...48  
electronic> : 42...50

Inlet pressure, bar : 0.30...0.40

Calibrating nozzle-  
holder assembly> : 1 688 901 022

Opening  
pressure> bar : 130...133

Test pressure line : 1 680 750 073

Outer diameter : 6.00  
x wall thickness> : 2.00  
x length> mm : 450

Overflow valve : 1 463 456 303

Test line : 1 684 463 219  
(fuel-delivery actuator)

Test line : 1 684 463 220  
(solenoid valve  
start of injection)

Port closing  
Prestroke mm : 0.5  
> (from BDC): +/-0.02

## ELECTRICAL TEST

Actuator  
Connections 4 and 7  
Test temperature:  
15°...30°C, ohms : 0.4...1.0  
50°...70°C, ohms : 0.45...1.1

Connection 4 and  
ground, Mohms min.: 1.0  
Connection 7 and  
ground, Mohms min.: 1.0  
Connection 2 and 7  
Mohms min. : 1.0  
Connection 4 and 6  
Mohms min. : 1.0

Control-collar travel sensor  
Test temperature :  
15°...70°C  
Connections 2 and 3  
kohms : 1.0...3.0  
Connections 1 and 3  
kohms : 0.5...2.0

Connection 1 and  
ground, Mohms min.: 1.0  
Connection 2 and  
ground, Mohms min.: 1.0  
Connection 3 and  
ground, Mohms min.: 1.0

Temperature sensor, fuel  
Connections 5 and 6  
Test temperature :  
15°...30°C, kohms : 1.2...4.0  
50°...70°C, kohms : 0.3...1.2

Connection 5 and  
ground, Mohms min.: 1.0  
Connection 6 and  
ground, Mohms min.: 1.0

Solenoid valve, start of  
injection  
Connections 1 and 2  
Test temperature :  
15°...30°C, ohms : 14.3...17.3  
50°...70°C, ohms : 15.5...21.0

Starting stop mV :  
max. mV : 4120...4650

Shutoff stop mV : 650...850

Setting values of injection pump  
Check values in brackets

Supply pump pressure:

Speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Setting value, bar: 6.4...7.0  
Solenoid valve  
Start of  
injection, volts : 0

Timing device travel:

Speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Setting value, mm : 7.0...7.4  
Solenoid valve  
Start of  
injection, volts : 0

Full-load delivery:

Speed 1/min : 1500  
Checkbk. volt. mV : 2600  
Fuel delivery cm3/  
> 1000str: 24.0...25.0  
Solenoid valve  
Start of  
injection, volts : 0  
Dispersion cm3/  
> 1000str:

Test specifications of injection pump  
Check values in brackets

Supply pump pressure variations:

1st speed 1/min : 400  
Checkbk. volt. mV : 3680  
Supply pump  
pressure > bar : 4.9...5.5  
> bar : (4.7...5.7)

Solenoid valve

Start of  
injection, volts : 0  
2nd speed 1/min : 1500  
Checkbk. volt. mV : 3520

Supply pump  
pressure > bar :  
> bar : (6.2...7.2)

Solenoid valve

Start of  
injection, volts : 0  
3rd speed 1/min : 2400  
Checkbk. volt. mV : 2970

Supply pump  
pressure > bar : 8.0...8.8  
> bar : (7.9...8.9)

Solenoid valve

Start of  
injection, volts : 0

Timing device variations:

1st speed 1/min : 150  
Checkbk. volt. mV : 3680  
Timing device  
travel mm : 1.6...4.4  
> mm : (1.3...4.7)

Solenoid valve

Start of  
injection, volts : 0  
2nd speed 1/min : 400  
Checkbk. volt. mV : 3680

Timing device

travel mm : 4.5...5.9  
> mm : (4.2...6.2)

Solenoid valve

Start of  
injection, volts : 0  
3rd speed 1/min : 1500  
Checkbk. volt. mV : 3520

Timing device

travel mm :  
> mm : (6.5...7.9)

Solenoid valve

Start of  
injection, volts : 0  
4th speed 1/min : 1500  
Checkbk. volt. mV : 3520

Timing device

travel mm : 0.0...0.2  
> mm : (0.0...0.2)

Solenoid valve

Start of  
injection, volts : 12  
5th speed 1/min : 2400  
Checkbk. volt. mV : 2970

Timing device

travel mm : 8.7...9.3  
> mm : (8.5...9.5)

Solenoid valve

Start of  
injection, volts : 0

Overflow at overflow valve

1st speed 1/min : 500  
Checkbk. volt. mV : 3100  
Solenoid valve  
Start of  
injection, volts : 0  
Overflow : 55...70  
> cm3/10: (50...75)

2nd speed 1/min : 2400  
Checkbk. volt. mV : 2970

Solenoid valve

Start of  
injection, volts : 0  
Overflow : 82...112  
> cm3/10: (77...117)

Fuel delivery variations:

1st speed 1/min : 2400  
Checkbk. volt. mV : 2970  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/ : 39.6...41.6  
> 1000str: (38.1...43.1)  
Dispersion cm3/ : 2.5  
> 1000str: (2.5)  
2nd speed 1/min : 1500  
Checkbk. volt. mV : 3000  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/ : 37.6...39.6  
> 1000str: (36.3...41.3)  
Dispersion cm3/ : 2.0  
> 1000str: (2.0)  
3rd speed 1/min : 1500  
Checkbk. volt. mV : 2600  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/ :  
> 1000str: (22.5...26.5)  
Dispersion cm3/ : 2.0  
> 1000str: (2.0)  
4th speed 1/min : 1000  
Checkbk. volt. mV : 3140  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/ : 36.3...38.3  
> 1000str: (34.8...39.8)  
Dispersion cm3/ : 2.0  
> 1000str: (2.0)  
5th speed 1/min : 1000  
Checkbk. volt. mV : 2400  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/ : 9.9...11.9  
> 1000str: (8.6...13.2)  
Dispersion cm3/ : 2.0  
> 1000str: (2.0)  
6th speed 1/min : 500  
Checkbk. volt. mV : 3100  
Solenoid valve  
Start of  
injection, volts : 0  
Fuel delivery cm3/ : 23.5...25.5  
> 1000str: (22.0...27.0)  
Dispersion cm3/ : 2.0  
> 1000str: (2.0)

Idle delivery:

Speed 1/min : 400  
Checkbk. volt. mV : 2770  
Fuel delivery cm3/ :  
> 1000str: (7.5...12.5)  
Solenoid valve  
Start of  
injection, volts : 12  
Dispersion cm3/ :  
> 1000str: (2.0)

Starting fuel delivery:

Speed 1/min : 100  
Checkbk. volt. mV : 3680  
Fuel delivery min.:  
> cm3/1000str: 24.0  
Solenoid valve  
Start of  
injection, volts : 12

Stop test:

Speed 1/min : 2400  
Checkbk. volt. mV : 2970  
ELAB, volts : 0  
Fuel delivery cm3/ :  
max. 1000str: 5.0

Shutoff solenoid:

Cut-in voltage  
min.> volts : 10.0  
Rated voltage,  
volts: 12.0

Dimensions for mounting and setting:

Description		
K	mm	:
KF	mm	: 5.9...6.2
SVS max.	mm	:
FH	mm	:

## BOSCH INJECTION PUMP TEST SPECIFICATIONS

Observe notes in remark column

Test sheet : BMW 2.4 G 1  
Date of manufacture :  
Edition : 10.12.1991  
Replaces : 05.07.1989  
Test oil : ISO 4113  
  
Injection pump : VE6/10E2400 R 260-1  
  
Type No. : 0 460 406 997  
Customer Ident. No. :

### Customer-specific details

Customer : BMW  
  
Engine : M 21 D 24 WA  
  
Output KW : 85  
Speed 1/min : 4800

### TEST BENCH PREREQUISITES

Test oil  
return temp. > °C  
with thermometer> : 40...48  
electronic> : 42...50  
  
Inlet pressure, bar : 0.30...0.40

Calibrating nozzle-  
holder assembly> : 1 688 901 022

Opening  
pressure> bar : 130...133

Test pressure line : 1 680 750 073

Outer diameter : 6.00  
x wall thickness> : 2.00  
x length> mm : 450

Overflow valve : 1 463 456 303

Test line : 1 684 463 217  
(fuel-delivery actuator)

Test line : 1 684 463 221  
(solenoid valve  
start of injection)

Port closing  
Prestroke mm : 0.5  
> (from BDC): +/-0.02

## ELECTRICAL TEST

Actuator  
Connections 4 and 7  
Test temperature:  
15°...30°C, ohms : 0.4...1.0  
50°...70°C, ohms : 0.45...1.1

Connection 4 and  
ground, Mohms min.: 1.0  
Connection 7 and  
ground, Mohms min.: 1.0  
Connection 2 and 7  
Mohms min. : 1.0  
Connection 4 and 6  
Mohms min. : 1.0

Control-collar travel sensor  
Test temperature :  
15°...70°C  
Connections 2 and 3  
kohms : 1.0...3.0  
Connections 1 and 3  
kohms : 0.5...2.0

Connection 1 and  
ground, Mohms min.: 1.0  
Connection 2 and  
ground, Mohms min.: 1.0  
Connection 3 and  
ground, Mohms min.: 1.0

Temperature sensor, fuel  
Connections 5 and 6  
Test temperature :  
15°...30°C, kohms : 1.2...4.0  
50°...70°C, kohms : 0.3...1.2

Connection 5 and  
ground, Mohms min.: 1.0  
Connection 6 and  
ground, Mohms min.: 1.0

Solenoid valve, start of  
injection  
Connections 1 and 2  
Test temperature :  
15°...30°C, ohms : 14.3...17.3  
50°...70°C, ohms : 15.5...21.0

Starting stop mV : 4120...4650

Shutoff stop mV : 650...850

Setting values of injection pump  
Check values in brackets

Supply pump pressure:

Speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Setting value, bar: 6.4...7.0  
Solenoid valve  
Start of  
injection, volts : 0

Timing device travel:

Speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Setting value, mm : 7.0...7.4  
Solenoid valve  
Start of  
injection, volts : 0

Full-load delivery:

Speed 1/min : 1500  
Checkbk. volt. mV : 2600  
Fuel delivery cm3/  
> 1000str: 25,6...26,0  
Solenoid valve  
Start of  
injection, volts : 0  
Dispersion cm3/  
> 1000str:

Test specifications of injection pump  
Check values in brackets

Supply pump pressure variations:

1st speed 1/min : 400  
Checkbk. volt. mV : 3680  
Supply pump  
pressure > bar : 4.9...5.5  
> bar : (4.7...5.7)

Solenoid valve

Start of  
injection, volts : 0  
2nd speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Supply pump  
pressure > bar :  
> bar : (6.2...7.2)

Solenoid valve

Start of  
injection, volts : 0  
3rd speed 1/min : 2400  
Checkbk. volt. mV : 2970  
Supply pump  
pressure > bar : 8.0...8.8  
> bar : (7.9...8.9)

Solenoid valve

Start of  
injection, volts : 0

Timing device variations:

1st speed 1/min : 150  
Checkbk. volt. mV : 3680  
Timing device  
travel mm :  
> mm : (1.3...4.7)

Solenoid valve

Start of  
injection, volts : 0  
2nd speed 1/min : 400  
Checkbk. volt. mV : 3680  
Timing device  
travel mm : 4.5...5.9  
> mm : (4.2...6.2)

Solenoid valve

Start of  
injection, volts : 0  
3rd speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Timing device  
travel mm :  
> mm : (6.5...7.9)

Solenoid valve

Start of  
injection, volts : 0  
4th speed 1/min : 1500  
Checkbk. volt. mV : 3520  
Timing device  
travel mm : 0.0...0.2  
> mm : (0.0...0.2)

Solenoid valve

Start of  
injection, volts : 12  
5th speed 1/min : 2400  
Checkbk. volt. mV : 2970  
Timing device  
travel mm : 8.7...9.3  
> mm : (8.5...9.5)

Solenoid valve

Start of  
injection, volts : 0

Overflow at overflow valve

1st speed 1/min : 500  
Checkbk. volt. mV : 3100  
Solenoid valve  
Start of  
injection, volts : 0  
Overflow : 55...70  
> cm3/10: (50...75)  
2nd speed 1/min : 2400  
Checkbk. volt. mV : 2970  
Solenoid valve  
Start of  
injection, volts : 0  
Overflow : 82...112  
> cm3/10: (77...117)



Fuel delivery variations:

1st speed 1/min : 2400  
 Checkbk. volt. mV :  
 Solenoid valve 2970  
 Start of  
 injection, volts : 0  
 Fuel delivery cm3/: 40.8...42.8  
 > 1000str: (39.3...44.3)  
 Dispersion cm3/: 2,5  
 > 1000str: (2,5)  
 2nd speed 1/min : 1500  
 Checkbk. volt. mV :  
 Solenoid valve 3000  
 Start of  
 injection, volts : 0  
 Fuel delivery cm3/: 38,2...40,2  
 > 1000str: (36.9...41,5)  
 Dispersion cm3/: 2,0  
 > 1000str: (2,0)  
 3rd speed 1/min : 1500  
 Checkbk. volt. mV :  
 Solenoid valve 2600  
 Start of  
 injection, volts : 0  
 Fuel delivery cm3/:  
 > 1000str: (23,8...27,8)  
 Dispersion cm3/:  
 > 1000str: (2,0)  
 4th speed 1/min : 1000  
 Checkbk. volt. mV :  
 Solenoid valve 3140  
 Start of  
 injection, volts : 0  
 Fuel delivery cm3/:  
 > 1000str: (37,8...42,8)  
 Dispersion cm3/: 2,0  
 > 1000str: (2,0)  
 5th speed 1/min : 1000  
 Checkbk. volt. mV :  
 Solenoid valve 2400  
 Start of  
 injection, volts : 0  
 Fuel delivery cm3/: 11,0...12.6  
 > 1000str: (9,5...14,1)  
 Dispersion cm3/: 2,0  
 > 1000str: (2,0)  
 6th speed 1/min : 625  
 Checkbk. volt. mV :  
 Solenoid valve 3000  
 Start of  
 injection, volts : 0  
 Fuel delivery cm3/:  
 > 1000str: (25.2...29.2)  
 7th speed 1/min : 500  
 Checkbk. volt. mV :  
 Solenoid valve 3100  
 Start of  
 injection, volts : 0  
 Fuel delivery cm3/: 26,9...28,9  
 > 1000str: (25,4...30,4)  
 Dispersion cm3/: 2,0  
 > 1000str: (2,0)

Idle delivery:

Speed 1/min : 400  
 Checkbk. volt. mV : 2770  
 Fuel delivery cm3/:  
 > 1000str: (7,7...12.7)  
 Solenoid valve  
 Start of  
 injection, volts : 12  
 Dispersion cm3/:  
 > 1000str: (2.0)

Starting fuel delivery:

Speed 1/min : 100  
 Checkbk. volt. mV : 3680  
 Fuel delivery min.:  
 > cm3/1000str: 26.0  
 Solenoid valve  
 Start of  
 injection, volts : 12

Stop test:

Speed 1/min : 2400  
 Checkbk. volt. mV : 2970  
 ELAB, volts : 0  
 Fuel delivery cm3/:  
 max. 1000str: 3.0

Shutoff solenoid:

Cut-in voltage  
 min.> volts : 10.0  
 Rated voltage,  
 volts: 12.0

Dimensions for mounting and setting:

Description	mm	:
K	mm	:
KF	mm	: 5.9...6.2
SVS max.	mm	:
FH	mm	:

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 MAC 11,0 k

1. Edition

En

PES 6 P 110 A 720 RS3024	RQV 300/600-1050	PA342KR	supersedes	-
		PA344KR	company	Mack
PES 6 P 110 A720/3RS3036	RQV 300/600-1050	PA365KR	engine	ETA 676 B
		PA366KR		(306 PS)

PLE-Maß = 0,740"-0,820"

\*\* Values only apply to test nozzle-and-holder assembly 0 681 343 009 and fuel-injection test tubing 1 680 750 015

## A. Fuel Injection Pump Settings

Port closing at prestroke <sup>2,4-2,5</sup> (2,35-2,55) mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	14,3+0,1	22,1-22,3	0,4			
300	5,0-5,2	1,2-2,3	0,4			

Adjust the fuel delivery from each outlet according to the values in

Testoil-ISO 4113

## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 2a	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm 4	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm 3	rev/min 10	mm 11
ca.68	1070 1150 1200 1280	15,5-18,0 6,0-11,0 0 - 6,8 0	-	-	-	ca.19	250 300 400 580 700 830	9,8-11,3 7,5- 8,5 2,5- 5,0 2,5- 5,0 0,8- 2,0 0	300 400 900 1070	0,6-1,8 -600 = 3,1-3,6 5,8-6,2 8,2

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp 40°C (104°F) ②		Rotational-speed limitation intermediate speed ④a	Fuel delivery characteristics high idle speed ⑤b		Starting fuel delivery idle switching point ⑥		Torque-control travel ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9
LDA 1000	1,7 bar 221,0-223,0	1090-1100*	LDA 800 500 LDA 600 300	1,7 bar 223,5-226,5 235,5-238,5 0 bar 143,0-146,0 114 -122 (PLE)	100 300	ca.11,5mmRW ca. 5 mmRW dispersion max. 4	1050 900 700 600 500	14,4 14,4 14,7 15,2 14,9

Checking values in brackets

\* 1 mm less control rod travel than col 2

# Test Specifications Fuel Injection Pumps ① and Governors

En

PE 6 P 120 A 320 RS 3032 Z RQV 250-1100 PA 355/2R

Testing with T nozzles and fuel lines 8x2x1000 according

supersedes 7.79  
company: Volvo  
engine: TD 120 C

\*\* In the case of greater dispersion alter the delivery-valve spring pre-tension accordingly.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke  $2,60-2,70$  mm (from BDC) Cyl. 6  
 $(2,55-2,75)$

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
700	13,0-13,1	24,5-24,9	0,5(0,9)			25±0,1 ** (max. 2,2-2,9)
250	5,2-5,5	0,9-1,3	0,5(0,8)			
700	-	C, 4-5	0,7(1,1)			

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm 6	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm 9	rev/min 10	mm 11
ca. 50	1100 1350	15,2-17,8 0 - 1,0				ca. 12	100 250	mind. 7,0 5,3-5,5	350 650	1,4-2,0 3,7-4,0
ca. 47	12,0 4,0	1140-1150 1235-1265					310-370 = 2,0		1170	8,3

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ④a	Fuel delivery characteristics high idle speed ⑤b	Starting fuel delivery Idle switching point ⑥	Torque-control travel ⑤
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	rev/min cm <sup>3</sup> /1000 strokes 6	rev/min Control rod travel mm 9
LDA 700	0,9 bar 245,0-249,0 (242,0-252,0)	1140 - 1150*	LDA 700	0 bar 148,0-152,0 (145,0-155,0)	100 110,0-160,0 250 9,0-13,0** dispersion max.5(8)

Checking values in brackets

\* 1 mm less control rod travel than cc1. 2

# D. Adjustment Test for Manifold Pressure Compensator

Test at n = 500 rev/min decreasing pressure - in bar gauge pressure

Pump/governor	Setting	Measurement	Control rod travel
	Gauge pressure = bar	Gauge pressure = bar	diminution difference mm (1)
3032 Z with 355/2R	0,66	0,14	12,1 - 12,2
			9,3 - 9,7

Notes.

(1) when n = rev/min and gauge pressure = bar (= maximum full-load control rod travel)

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4

3. Edition

En

PES 6 MW 100/320 RS 1016 RQV 300-1400 MW 25  
Komb.-Nr. 0 403 446 117  
1-5-3-6-2-4 = 0-60-120-180-240-300 ± 0,50° (0,75)

supersedes 2.81  
company: RVI  
engine: MIDR 06.02-12  
125 kW  
(170 PS)

Port closing mark 10,5° after port closing cylinder 1

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 3,00-3,10 mm (from BDC) RW 9,0-12,0 mm  
(2,95-3,15)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> /100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1400	11,1±0,1	9,0 - 9,2	0,35(0,6)			
300 900 500	6,3-6,5	0,95 - 1,35	0,35(0,55) 0,5 (0,7) 0,35(0,6)			

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min ①a ②b	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm ④	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm ③	rev/min 10	mm 11
ca. 68	1400 1700	15,2-17,8 0 - 1,0				ca. 13	100 300 490-550	min. 8,0 6,3-6,5 =2,0		
ca. 64	10,1 4,0	1440-1450 1540-1570				③a				

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ④a	Fuel delivery characteristics ⑤a high idle speed ⑤b		Starting fuel delivery idle switching point ⑥		Torque-control travel ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9
LDA 1400	0,67 bar 90,0-92,0 (88,0-94,0)	1440-1450*	LDA 900 LDA 500	0,67 bar 86,5-90,5 (84,5-92,5) 0 bar 61,0-63,0 (58,0-66,0)	100 300	min. 100,0 9,5-13,5 (7,0-16,0)		

Checking values in brackets

\* 1 mm less control rod travel than col. 2

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 MAC 11,0 x 6

1. Edition

En

US-PES 6 P 110 A 720 RS 5006 US-RQV 300/600-1050 PA621-7K supersedes  
 Komb.-Nr. 9 400 231 171 PLE-Maß = 0,740" - 0,820" company:  
 Note VDT-I-MAC 002! engine:  
 Values only apply to test nozzle-and-holder assembly 0 681 343 009 MACK  
 and fuel-injection test tubing 1 680 750 015 EME 6 - 250  
250 PS

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke <sup>3,2-3,3</sup>  
 (3,15-3,35) mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1050	11,7+0,1	17,7-17,9	0,4			
300	5,2-5,4	2,4 - 3,0	0,4			

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm 6	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm 9	rev/min 10	mm 11
max.	1120	15,2-17,8	-	-	-	ca. 20	250	9,8-11,3	-	-
ca. 61	10,7 4,0 1230	1090-1100 1165-1195 0 - 1,0						300 7,9-8,1 400 3,8-5,2 690-750 =2,0		

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F)		Rotational-speed limitation intermediate speed	Fuel delivery characteristics high idle speed		Starting fuel delivery idle switching point		Torque-control travel	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9
1050	176,5-178,5	1090-1100*	850	184,0-188,0	100	120,0-180,0	1050	11,7
			630	202,0-206,0			1000	11,6+0,1
			800	121,0-129,0			850	11,9+0,1
				PLE			750	12,2+0,1
							630	12,8+0,1
							500	12,1+0,1

Checking values in brackets

\* 1 mm less control rod travel than col. 2

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 SCA 11,0 r 2  
2. Edition

En

PE 6 P 110 A 720 RS 3040 RQV 250-1050 PA 379

supersedes 11.79  
company: Scania  
engine: DS 11

\*\* In the case of greater dispersion alter the delivery-valve spring pre-tension accordingly.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke  $\frac{3,30-3,40}{(3,25-3,45)}$  mm (from BDC) Cyl. 6

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1050	13,4-13,5	16,6 - 16,8	0,4(0,8)			3,3 ± ** (max. 3,0-3,5)
225	3,7-3,9	0 1,1	0,2(0,4)			
600/500	-	C, 4-5	0,6(1,0)			

Adjust the fuel delivery from each outlet according to the values in

## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel ①	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3a 2a	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm 4	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm 3	rev/min 10	mm 11
ca. 68	1050 1350	15,2-17,8 0 - 1,0	-	-	-	ca. 8	100 225 290-350=2,0	min.5,3 3,7-3,9	225 360 1050	1,3 2,5-2,9 8,2
ca. 64	12,4 4,0	1090-1100 1190-1220				3a				

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ②b ④a	Fuel delivery characteristics high idle speed ⑤a ⑤b		Starting fuel delivery idle switching point ⑥		Torque-control travel ⑤ Control rod travel mm	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	mm 9
LDA 1050	0,7 bar 166,0-168,0 (163,0-171,0)	1090-1100*	LDA 600	0,7 bar 169,0-173,0 (166,0-176,0)	100	220,0-270,0		
			LDA 500	0 bar 126,0-130,0 (123,0-133,0)	255	9-13**		

Checking values in brackets

\* 1 mm less control rod travel than col. 2



# D. Adjustment Test for Manifold Pressure Compensator

Test at n = 500 rev/min decreasing pressure - in bar gauge pressure

SCA 11,0 r 2

Pump/governor	Setting Gauge pressure = bar	Measurement Gauge pressure = bar	Control rod travel- diminution difference mm (1)
3040 with 379	0,41	0,25	12,9 - 13,0 11,8 - 12,0

Notes.

(1) when n = rev/min and gauge pressure = bar (= maximum full-load control rod travel)

E3

En

e3

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 ALO 11,0 b

En

PES 6 P 110 A 320 RS 211 RQV 300...1100 PA 173 KR  
0 402 046 056  
1 - 5 - 3 - 6 - 2 - 4  
Values only apply to test nozzle-and-holder assembly 0 681 343 009 and fuel-injection test tubing 9 681 230 704

supersedes  
company Allis-Chalmers  
engine 11000

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	12	16,0 - 16,8				
600	9	8,5 - 9,7				
	12	15,2 - 16,7				
200	15	21,5 - 23,3				
	9	6,8 - 8,1				

Adjust the fuel delivery from each outlet according to the values in

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## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel ①	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min ①a ②a	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm ④	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm ③	rev/min 10	mm 11
66°	1100	14,8-17,6				10°	250	6,2-8,0	350	1,8-3,0
	1150	10,7-14,7			300		4,2-6,5	600	3,9-4,4	
	1200	6,0-11,4			400		0,2-5,6	1000	7,0-7,4	
	1280	0- 5,6			570		0			
	1360	0								

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational speed limitation intermediate speed ②b ④a	Fuel delivery characteristics ⑤a high idle speed ⑤b		Starting fuel delivery idle switching point ⑥		Torque-control ⑤ travel Control rod travel mm	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	mm 9

Checking values in brackets

\* 1 mm less control rod travel than col. 2

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a) rev/min	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

-2-

AC-Nr. 4 320 754	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 793	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 815	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 816	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 817	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 829	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 933	900	102,0-110,0	1040	800	107,0-116,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 939	900	98,5 ± 3	1040	700	107,5 ± 4	100	90,0-130,0	300	25,0
AC-Nr. 4 320 940	900	78,0- 86,0	1040	700	100,0-109,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 941	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 942	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 980	900	108,0-116,0	1120	800	-	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 981	900	111,0-119,0	1020	800	112,0-118,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 016	750	95,0-101,0	1020	750	95,0-101,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 064	1000	112,0	1030	800	112,5	100	90,0-130,0	300	25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 359 816	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 826	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 828	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 359 830	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 832	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 392 693	1050	205,0-215,0	1065-80	900	167,0-177,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 695	900	149,0-155,0	920	-	-	-	-	300	19,0-25,0
AC-Nr. 4 392 697	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 699	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 701	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 703	1050	220,0-230,0	1060-70	900 700	200,0-210,0 205,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 707	1050	243,0-253,0	1060-80	900 700	222,0-232,0 235,0-245,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 709	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 711	600	231,0-237,0	620	-	-	-	-	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 392 715	1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 717	1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 719	1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 721	1050	242,0-248,0	1070	900 700	220,0-226,0 230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 723	750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 725	800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 727	900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 729	1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 731	900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 392 735	1050	239,0-245,0	1070	900 700	233,0-239,0 273,0-279,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 737	1000	215,0-221,0	1020	800 600	197,0-203,0 220,0-226,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 739	1050	207,0-213,0	1050	900 700	195,0-201,0 225,0-231,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 741	1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 392 743	1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0-25,0

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E7

F7

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery (2) Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery (6) idle switching point		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 392 747								
1050	227,0-233,0	1070	900	208,0-214,0	100	130,0-170,0	300	19,0-25,0
			700	247,0-253,0				
AC-Nr. 4 392 749								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 750								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 768								
800	123,0-133,0	820	600	132,0-142,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 775/776								
875	162,0-164,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 777								
950	205,0-207,0	970	700	195,0-199,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 778								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 3 392 779								
1025	190,0-200,0	1030-40	1000	191,0-201,0	100	130,0-170,0	300	19,0-25,0
			900	178,0-188,0				
AC-Nr. 4 392 781								
1025	228,0-238,0	1050-60	900	205,0-215,0	100	130,0-170,0	300	19,0-25,0
			700	207,0-217,0				
AC-Nr. 4 392 953								
940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 095								
1050	211,0-221,0	1060-80	900	210,0-220,0	100	130,0-170,0	300	19,0-25,0
			700	238,0-248,0				
AC-Nr. 4 393 307								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 393 431								
1050	208,0-214,0	1070	900	230,0-235,0	100	130,0-170,0	300	19,0-25,0
			700	260,0-266,0				
AC-Nr. 4 393 821								
1050	242,0-248,0	1070	900	220,0-226,0	100	130,0-170,0	300	19,0-25,0
			700	230,0-236,0				

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed rev/min ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ Idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes		rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

-6-

AC-Nr. 4 393 823	1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 825	1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 827	1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 829	1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 831	1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 393 833	1050	264,0	1060-1080	900	280,5	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 835	1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 837	1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 890	950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 393 891	955	208,0	965-975	895	203,0	-	-	-	-
AC-Nr. 4 393 961	900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 001	700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 017	950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 020	700	249,0-257,0	725	600	258,0-264,0	100	130,0-170,0	300	19,0-29,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 062	800	113,0-119,0	820	600	102,0-108,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 064	875	161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 066	800	125,0-131,0	820	600	134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 068	1025	192,0-198,0	1045	900	180,0-186,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 070	1000	200,0-206,0	1020	800 600	180,0-186,0 189,0-195,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 072	940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 074	1025	230,0-236,0	1040	900 700	207,0-213,0 209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 076	1000	227,0-233,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 078	1000	235,0-241,0	1020	700	263,0-269,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 080	1000	220,0-226,0	1020	800 600	209,0-215,0 227,0-233,0	100	130,0-170,0	300	19,0,25,0
AC-Nr. 4 394 082	910	190,0	930	-	-	100	130,0-170,0	300	25,0
AC-Nr. 4 394 084	900	160,0-166,0	920	700	139,0-145,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 086	600	124,0-130,0	620	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 088	700	127,0-133,0	720	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 090	800	139,0-145,0	820	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control rod stop Test oil temp. 40°C (104°F) ②		Breakaway immediate speed ②a	Full-load delivery Control rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 092								
925	157,0-163,0	945	800	145,0-151,0	100	130,0-170,0	300	19,0-25,0
			600	134,0-140,0				
AC-Nr. 4 394 094								
1000	180,0-186,0	1020	800	154,0-160,0	100	130,0-170,0	300	19,0-25,0
			700	142,0-148,0				
AC-Nr. 4 394 096								
1050	207,0-213,0	1070	900	161,0-175,0	100	130,0-170,0	300	19,0-25,0
			800	147,0-153,0				
AC-Nr. 4 394 098								
900	187,0-193,0	920	700	162,0-168,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 100								
900	200,0-206,0	920	700	184,0-190,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 102								
900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 104								
750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 106								
800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 108								
1050	222,0-228,0	1070	900	202,0-208,0	100	130,0-170,0	300	19,0-25,0
			700	207,0-213,0				
AC-Nr. 4 394 110								
1000	240,0-246,0	1020	800	224,0-230,0	100	130,0-170,0	300	19,0-25,0
			600	237,0-243,0				
AC-Nr. 4 394 112								
1050	245,0-251,0	1070	900	224,0-230,0	100	130,0-170,0	300	19,0-25,0
			700	237,0-243,0				
AC-Nr. 4 394 114								
1000	217,0-223,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
			600	219,0-225,0				
AC-Nr. 4 394 116								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 118								
1050	269,0-275,0	1070	900	281,0-287,0	100	130,0-170,0	300	19,0-25,0
			700	293,0-299,0				

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 394 120								
1050	234,0-240,0	1070	900 700	246,0-252,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 122								
1050	262,0-268,0	1070	900 700	279,0-285,0 289,0-295,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 124								
1050	241,0-247,0	1070	900 700	265,0-271,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 126								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 128								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 130								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 132								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 134								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 136								
1000	255,0-261,0	1020	800 600	272,0-278,0 270,0-276,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 138								
1050	239,0-245,0	1070	900 700	233,0-239,0 273,0-279,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 140								
1000	215,0-221,0	1020	800 600	197,0-203,0 220,0-226,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 142								
900	222,0-228,0	920	700	254,0-260,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 144								
1050	257,0-263,0	1070	750	272,0-278,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 148								
1050	295,0-303,0	1075	900	309,0-315,0	100	130,0-170,0	300	25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery (2) Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery (6) idle switching point		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 150								
1050	268,0-274,0	1070	900	274,0-280,0	100	130,0-170,0	300	19,0-25,0
			700	280,0-286,0				
AC-Nr. 4 394 152								
1050	262,0-268,0	1070	900	267,0-273,0	100	130,0-170,0	300	19,0-25,0
			700	267,0-273,0				
AC-Nr. 4 394 154								
1050	279,0-285,0	1070	900	283,0-289,0	100	130,0-170,0	300	19,0-25,0
			700	293,0-299,0				
AC-Nr. 4 394 156								
1050	296,0-302,0	1070	900	301,0-307,0	100	130,0-170,0	300	19,0-25,0
			700	309,0-315,0				
AC-Nr. 4 394 158								
"	4 394 157							
1050	253,0-256,0	1070	900	252,0-258,0	100	130,0-170,0	300	19,0-25,0
			700	269,0-275,0				
AC-Nr. 4 394 160								
1050	208,0-214,0	1070	900	230,0-235,0	100	130,0-170,0	300	19,0-25,0
			700	260,0-266,0				
AC-Nr. 4 394 162								
900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 164								
925	176,0-182,0	945	800	162,0-168,0	100	130,0-170,0	300	19,0-25,0
			700	177,0-183,0				
AC-Nr. 4 394 166								
900	173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 168								
925	237,0-243,0	945	800	251,0-257,0	100	130,0-170,0	300	27,0-33,0
			700	269,0-275,0				
AC-Nr. 4 394 170								
700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 176								
1050	213,0-219,0	1070	900	212,0-218,0	100	130,0-170,0	300	19,0-25,0
			700	240,0-246,0				

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 246

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	300	19,0-25,0
			700	258,5-269,5				
			600	255,5-266,0				

Tilt stop part position to obtain quantity at 1050 PRM.

Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

700	246,0	720			100	130,0-170,0	300	19,0-25,0
600	263,0							

AC-Nr. 4 394 250

1050	244,5-254,5	1060-1080			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 257

600	258,0				100	130,0-170,0	300	27,0
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AC-Nr. 4 394 314

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 331

1050	241,0-247,0	1070			100	130,0-170,0	300	19,0-25,0
900	265,0-271,0							
700	268,0-274,0							

AC-Nr. 4 394 332

1050	268,0-274,0	1070			100	130,0-170,0	300	19,0-25,0
900	274,0-280,0							
700	280,0-286,0							

AC-Nr. 4 394 347

1050	269,0-275,0	1070			100	130,0-170,0	300	19,0-25,0
900	281,0-287,0							
700	293,0-299,0							

AC-Nr. 4 394 348

1050	234,0-240,0	1070			100	130,0-170,0	300	19,0-25,0
900	246,0-252,0							
700	268,0-274,0							

AC-Nr. 4 394 349

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 350

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	279,0-285,0							
700	289,0-295,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min (4a)	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 351

1050	253,0-256,0	1070			100	130,0-170,0	300	19,0-25,0
900	252,0-258,0							
700	269,0-275,0							

AC-Nr. 4 394 352

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	267,0-273,0							
700	267,0-273,0							

AC-Nr. 4 394 353

1050	279,0-285,0	1070			100	130,0-170,0	300	19,0-25,0
900	283,0-289,0							
700	293,0-299,0							

AC-Nr. 4 394 354

1050	296,0-302,0	1070			100	130,0-170,0	300	19,0-25,0
900	301,0-307,0							
700	309,0-315,0							

AC-Nr. 4 394 356

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 386

600	167,0-175,0	620			100	130,0-170,0	300	25,0
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AC-Nr. 4 394 390

900	259,0-267,0	925			100	130,0-170,0	300	19,0-29,0
700	238,0-246,0							

AC-Nr. 4 394 428

1000	188,0-196,0	1025			100	130,0-170,0	300	25,0
800	180,0-187,0							

AC-Nr. 4 394 473

850	189,0-197,0	875			100	130,0-170,0	325	30,0
750	185,0-193,0							

AC-Nr. 4 394 501

900	175,0	925			100	130,0-170,0	300	19,0-25,0
700	158,0							

AC-Nr. 4 394 521

1000	239,0-247,0	1025			100	130,0-170,0	300	25,0
700	229,0-235,0							

AC-Nr. 4 394 527

900	161,0	925			100	130,0-170,0	300	19,0-25,0
800	151,0							

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 541  
1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550  
1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561  
1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564  
1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569  
1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590  
1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593  
1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703  
1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705  
" 4 394 706  
1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707  
1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718  
955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719  
875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733  
1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 740/741

1020	213,0-226,0	1030-1040
915	208,0-218,0	

AC-Nr. 4 394 744

1050	250,0	1060-1080	100	130,0-170,0	300	19,0-25,0
900	256,0					

AC-Nr. 4 394 745

950	208,0-214,0	990	100	130,0-170,0	300	21,0-27,0
750	196,0-202,0					

AC-Nr. 4 394 746

875	161,0-165,0	890	100	130,0-170,0	300	19,0-25,0
600	140,0-144,0					

AC-Nr. 4 394 771

800	113,0-119,0	820	100	130,0-170,0	300	19,0-25,0
600	102,0-108,0					

AC-Nr. 4 394 773

800	125,0-131,0	820	100	130,0-170,0	300	19,0-25,0
600	134,0-140,0					

AC-Nr. 4 394 775

1025	192,0-198,0	1045	100	130,0-170,0	300	19,0-25,0
900	180,0-186,0					

AC-Nr. 4 394 777

1000	200,0-206,0	1020	100	130,0-170,0	300	19,0-25,0
800	180,0-186,0					
600	189,0-195,0					

AC-Nr. 4 394 779

940	185,0-195,0	955-65	100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 781

1025	230,0-236,0	1040	100	130,0-170,0	300	19,0-25,0
900	207,0-213,0					
700	209,0-215,0					

AC-Nr. 4 394 783

1000	227,0-233,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					

AC-Nr. 4 394 785

1000	235,0-241,0	1020	100	130,0-170,0	300	19,0-25,0
700	263,0-269,0					

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 787

1000	220,0-226,0	1020			100	130,0-170,0	300	19,0-25,0
800	209,0-215,0							
600	227,0-233,0							

AC-Nr. 4 394 789

910	190,0	930			100	130,0-170,0	300	25,0
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AC-Nr. 4 394 791

900	160,0-166,0	920			100	130,0-170,0	300	19,0-25,0
700	139,0-145,0							

AC-Nr. 4 394 793

600	124,0-130,0	620			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 795

700	127,0-133,0	720			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							

AC-Nr. 4 394 797

800	139,0-145,0	820			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							

AC-Nr. 4 394 799

925	157,0-163,0	945			100	130,0-170,0	300	19,0-25,0
800	145,0-151,0							
600	134,0-140,0							

AC-Nr. 4 394 801

1000	180,0-186,0	1020			100	130,0-170,0	300	19,0-25,0
800	154,0-160,0							
700	142,0-148,0							

AC-Nr. 4 394 803

1050	207,0-213,0	1070			100	130,0-170,0	300	19,0-25,0
900	161,0-175,0							
800	147,0-153,0							

AC-Nr. 4 394 805

900	187,0-193,0	920			100	130,0-170,0	300	27,0-33,0
700	162,0-168,0							

AC-Nr. 4 394 807

900	200,0-206,0	920			100	130,0-170,0	300	27,0-33,0
700	184,0-190,0							

AC-Nr. 4 394 809

900	203,0-209,0	920			100	130,0-170,0	300	19,0-25,0
700	209,0-215,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 811

750 185,0-191,0  
600 222,0-228,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0  
600 223,0-229,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0  
900 202,0-208,0  
700 207,0-213,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 817

1000 240,0-246,0  
800 224,0-230,0  
600 237,0-243,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 819

1050 245,0-251,0  
900 224,0-230,0  
700 237,0-243,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 821

1000 217,0-223,0  
800 197,0-203,0  
600 219,0-225,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 823

900 210,0-216,0  
700 212,0-218,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0  
900 281,0-287,0  
700 293,0-299,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 827

1050 234,0-240,0  
900 246,0-252,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 829

1050 262,0-268,0  
900 279,0-285,0  
700 289,0-295,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 831

1050 241,0-247,0  
900 265,0-271,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway intermediate speed (2b)	Fuel delivery characteristics high idle speed (5a)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 833

900	232,0-238,0	920	100	130,0-170,0	300	19,0-25,0
700	253,0-259,0					

AC-Nr. 4 394 835

750	244,0-250,0	770	100	130,0-170,0	300	19,0-25,0
700	253,0-259,0					

AC-Nr. 4 394 837

800	239,0-245,0	820	100	130,0-170,0	300	19,0-25,0
600	248,0-254,0					

AC-Nr. 4 394 839

1000	212,0-218,0	1020	100	130,0-170,0	300	19,0-25,0
800	230,0-236,0					

AC-Nr. 4 394 841

900	288,0-294,0	920	100	130,0-170,0	300	27,0-33,0
700	287,0-293,0					

AC-Nr. 4 394 843

1000	255,0-261,0	1020	100	130,0-170,0	300	19,0-25,0
800	272,0-278,0					
600	270,0-276,0					

AC-Nr. 4 394 845

1050	239,0-245,0	1070	100	130,0-170,0	300	19,0-25,0
900	233,0-239,0					
700	273,0-279,0					

AC-Nr. 4 394 847

1000	215,0-221,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					
600	220,0-226,0					

AC-Nr. 4 394 849

900	222,0-228,0	920	100	130,0-170,0	300	19,0-25,0
700	254,0-260,0					

AC-Nr. 4 394 851

1050	257,0-263,0	1070	100	130,0-170,0	300	27,0-33,0
750	272,0-278,0					

AC-Nr. 4 394 853

1050	295,0-303,0	1075	100	130,0-170,0	300	25,0
900	309,0-315,0					

AC-Nr. 4 394 857

1050	262,0-268,0	1070	100	130,0-170,0	300	19,0-25,0
900	267,0-273,0					
700	267,0-273,0					

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 861

1050	296,0-302,0	1070			100	130,0-170,0	300	19,0-25,0
900	301,0-307,0							
700	309,0-315,0							

AC-Nr. 4 394 863

1050	253,0-256,0	1070			100	130,0-170,0	300	19,0-25,0
900	252,0-258,0							
700	269,0-275,0							

AC-Nr. 4 394 865

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 867

900	181,0-187,0	920			100	130,0-170,0	300	19,0-25,0
700	172,0-178,0							

AC-Nr. 4 394 869

925	176,0-182,0	945			100	130,0-170,0	300	19,0-25,0
800	162,0-168,0							
700	177,0-183,0							

AC-Nr. 4 394 871

900	173,0-179,0	920			100	130,0-170,0	300	19,0-25,0
800	160,0-166,0							

AC-Nr. 4 394 873

925	237,0-243,0	945			100	130,0-170,0	300	27,0-33,0
800	251,0-257,0							
700	269,0-275,0							

AC-Nr. 4 394 875

700	218,0-224,0	720			100	130,0-170,0	300	27,0-33,0
600	240,0-246,0							

AC-Nr. 4 394 877

1050	213,0-219,0	1060-1080			100	130,0-170,0	300	19,0-25,0
900	212,0-218,0							
700	240,0-246,0							

AC-Nr. 4 394 879

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	19,0-25,0
			700	258,5-269,5			
			600	255,5-266,0			

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test at temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a) rev/min	Fuel delivery characteristics (5a) high idle speed (5b) rev/min		Starting fuel delivery idle switching point (6) rev/min		Low idle speed (5) Control rod travel mm	
1 rev/min	2 cm <sup>3</sup> /1000 strokes	3	4 rev/min	5 cm <sup>3</sup> /1000 strokes	6 rev/min	7 cm <sup>3</sup> /1000 strokes	8 rev/min	9 mm

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AC-Nr. 4 394 881

700 246,0  
600 263,0

720

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 883

1050 244,5-254,5

1060-1080

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 885

600 258,0

100 130,0-170,0 300 27,0

AC-Nr. 4 394 891

600 167,0-175,0

620

100 130,0-170,0 300 25,0

AC-Nr. 4 394 893

900 259,0-267,0  
700 238,0-246,0

925

100 130,0-170,0 300 19,0-29,0

AC-Nr. 4 394 895

1000 188,0-196,0  
800 180,0-187,0

1025

100 130,0-170,0 300 25,0

AC-Nr. 4 394 897

850 189,0-197,0  
750 185,0-193,0

875

100 130,0-170,0 325 30,0

AC-Nr. 4 394 899

900 175,0  
700 158,0

925

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 905

1000 239,0-247,0  
700 229,0-235,0

1025

100 130,0-170,0 300 25,0

AC-Nr. 4 394 907

900 161,0  
800 151,0

925

100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

1050 202,0-210,5

1060-1080

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 911

1000 230,5-239,5

1010-1030

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 915

1000 203,0-211,5

1010-1030

100 130,0-170,0 300 19,0-25,0

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0



# Test Specifications Fuel Injection Pumps 1 and Governors

WPP 001/4 ALO 16,0 b

En

PE 6 P 120/420 LS 152 RQV 300...1050 PA 154 KR  
0 401 846 178 ; 0 401 846 228  
1 - 5 - 3 - 6 - 2 - 4  
Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703

supersedes  
company Allis-Chalmers  
engine 16000-25000

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> /100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	12	26,4 - 27,1			1,0	
600	6	8,6 - 9,8				
	12	26,2 - 28,2				
	15	33,8 - 36,2				
200	6	4,2 - 5,2				

Adjust the fuel delivery from each outlet according to the values in

Testoil-ISO 4113

## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm 4	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm 3	rev/min 10	mm 11
66°	1050 1100 1150 1210	15,0-18,0 10,7-15,0 6,0-11,6 0,7				10°	250 350 450 550	6,4-8,0 3,0-5,2 1,3-2,8 0		

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) 2		Rotational-speed limitation intermediate speed 3	Fuel delivery characteristics high idle speed 5a		Starting fuel delivery idle switching point 6		Torque-control travel 5	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5b	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

Checking values in brackets

\* 1 mm less control rod travel than col. 2

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a rev/min	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

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AC-Nr. 4 320 754								
1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 793								
1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 815								
900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 816								
900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 817								
1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 829								
1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 933								
900	102,0-110,0	1040	800	107,0-116,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 939								
900	98,5 ± 3	1040	700	107,5 ± 4	100	90,0-130,0	300	25,0
AC-Nr. 4 320 940								
900	78,0- 86,0	1040	700	100,0-109,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 941								
1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 942								
1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 980								
900	108,0-116,0	1120	800	-	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 981								
900	111,0-119,0	1020	800	112,0-118,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 016								
750	95,0-101,0	1020	750	95,0-101,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 064								
1000	112,0	1030	800	112,5	100	90,0-130,0	300	25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 359 816	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 826	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 828	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 359 830	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 832	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 392 693	1050	205,0-215,0	1065-80	900	167,0-177,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 695	900	149,0-155,0	920	-	-	-	-	300	19,0-25,0
AC-Nr. 4 392 697	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 699	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 701	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 703	1050	220,0-230,0	1060-70	900 700	200,0-210,0 205,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 707	1050	243,0-253,0	1060-80	900 700	222,0-232,0 235,0-245,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 709	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 711	600	231,0-237,0	620	-	-	-	-	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 392 715

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 392 717

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 719

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 392 721

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

AC-Nr. 4 392 723

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 725

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 727

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 729

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 731

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 392 735

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 392 737

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 392 739

1050 207,0-213,0 1050 900 195,0-201,0 100 130,0-170,0 300 19,0-25,0  
700 225,0-231,0

AC-Nr. 4 392 741

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 392 743

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop ② Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 392 747								
1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 749								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 750								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 768								
800	123,0-133,0	820	600	132,0-142,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 775/776								
875	162,0-164,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 777								
950	205,0-207,0	970	700	195,0-199,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 778								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 3 392 779								
1025	190,0-200,0	1030-40	1000 900	191,0-201,0 178,0-188,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 781								
1025	228,0-238,0	1050-60	900 700	205,0-215,0 207,0-217,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 953								
940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 095								
1050	211,0-221,0	1060-80	900 700	210,0-220,0 238,0-248,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 307								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 393 431								
1050	208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 821								
1050	242,0-248,0	1070	900 700	220,0-226,0 230,0-236,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 393 823								
1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 825								
1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 827								
1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 829								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 831								
1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 393 833								
1050	264,0	1060-1080	900	280,5	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 835								
1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 837								
1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 890								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 393 891								
955	208,0	965-975	895	203,0	-	-	-	-
AC-Nr. 4 393 961								
900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 001								
700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 017								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 020								
700	249,0-257,0	725	600	258,0-264,0	100	130,0-170,0	300	19,0-29,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

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AC-Nr. 4 394 062	800	113,0-119,0	820	600	102,0-108,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 064	875	161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 066	800	125,0-131,0	820	600	134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 068	1025	192,0-198,0	1045	900	180,0-186,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 070	1000	200,0-206,0	1020	800 600	180,0-186,0 189,0-195,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 072	940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 074	1025	230,0-236,0	1040	900 700	207,0-213,0 209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 076	1000	227,0-233,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 078	1000	235,0-241,0	1020	700	263,0-269,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 080	1000	220,0-226,0	1020	800 600	209,0-215,0 227,0-233,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 082	910	190,0	930	-	-	100	130,0-170,0	300	25,0
AC-Nr. 4 394 084	900	160,0-166,0	920	700	139,0-145,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 086	600	124,0-130,0	620	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 088	700	127,0-133,0	720	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 090	800	139,0-145,0	820	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery (2) Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery (6) idle switching point		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

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AC-Nr. 4 394 092	925	157,0-163,0	945	800 600	145,0-151,0 134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 094	1000	180,0-186,0	1020	800 700	154,0-160,0 142,0-148,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 096	1050	207,0-213,0	1070	900 800	161,0-175,0 147,0-153,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 098	900	187,0-193,0	920	700	162,0-168,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 100	900	200,0-206,0	920	700	184,0-190,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 102	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 104	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 106	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 108	1050	222,0-228,0	1070	900 700	202,0-208,0 207,0-213,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 110	1000	240,0-246,0	1020	800 600	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 112	1050	245,0-251,0	1070	900 700	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 114	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 116	900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 118	1050	269,0-275,0	1070	900 700	281,0-287,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery (2) Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery (6) idle switching point		Low idle speed (5)	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 394 120

1050 234,0-240,0 1070 900 246,0-252,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 122

1050 262,0-268,0 1070 900 279,0-285,0 100 130,0-170,0 300 19,0-25,0  
700 289,0-295,0

AC-Nr. 4 394 124

1050 241,0-247,0 1070 900 265,0-271,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 126

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 128

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 130

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 132

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 134

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 136

1000 255,0-261,0 1020 800 272,0-278,0 100 130,0-170,0 300 19,0-25,0  
600 270,0-276,0

AC-Nr. 4 394 138

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 394 140

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 394 142

900 222,0-228,0 920 700 254,0-260,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 144

1050 257,0-263,0 1070 750 272,0-278,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 148

1050 295,0-303,0 1075 900 309,0-315,0 100 130,0-170,0 300 25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 394 150								
1050	268,0-274,0	1070	900 700	274,0-280,0 280,0-286,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 152								
1050	262,0-268,0	1070	900 700	267,0-273,0 267,0-273,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 154								
1050	279,0-285,0	1070	900 700	283,0-289,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 156								
1050	296,0-302,0	1070	900 700	301,0-307,0 309,0-315,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 158 " 4 394 157								
1050	253,0-256,0	1070	900 700	252,0-258,0 269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 160								
1050	208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 162								
900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 164								
925	176,0-182,0	945	800 700	162,0-168,0 177,0-183,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 166								
900	173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 168								
925	237,0-243,0	945	800 700	251,0-257,0 269,0-275,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 170								
700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 176								
1050	213,0-219,0	1070	900 700	212,0-218,0 240,0-246,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 246

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	300	19,0-25,0
			700	258,5-269,5				
			600	255,5-266,0				

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

700	246,0	720			100	130,0-170,0	300	19,0-25,0
600	263,0							

AC-Nr. 4 394 250

1050	244,5-254,5	1060-1080			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 257

600	258,0				100	130,0-170,0	300	27,0
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AC-Nr. 4 394 314

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 331

1050	241,0-247,0	1070			100	130,0-170,0	300	19,0-25,0
900	265,0-271,0							
700	268,0-274,0							

AC-Nr. 4 394 332

1050	268,0-274,0	1070			100	130,0-170,0	300	19,0-25,0
900	274,0-280,0							
700	280,0-286,0							

AC-Nr. 4 394 347

1050	269,0-275,0	1070			100	130,0-170,0	300	19,0-25,0
900	281,0-287,0							
700	293,0-299,0							

AC-Nr. 4 394 348

1050	234,0-240,0	1070			100	130,0-170,0	300	19,0-25,0
900	246,0-252,0							
700	268,0-274,0							

AC-Nr. 4 394 349

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 350

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	279,0-285,0							
700	289,0-295,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 351

1050	253,0-256,0	1070	100	130,0-170,0	300	19,0-25,0
900	252,0-258,0					
700	269,0-275,0					

AC-Nr. 4 394 352

1050	262,0-268,0	1070	100	130,0-170,0	300	19,0-25,0
900	267,0-273,0					
700	267,0-273,0					

AC-Nr. 4 394 353

1050	279,0-285,0	1070	100	130,0-170,0	300	19,0-25,0
900	283,0-289,0					
700	293,0-299,0					

AC-Nr. 4 394 354

1050	296,0-302,0	1070	100	130,0-170,0	300	19,0-25,0
900	301,0-307,0					
700	309,0-315,0					

AC-Nr. 4 394 356

1050	246,0	1070	100	130,0-170,0	300	19,0-25,0
900	240,0					
700	267,0					

AC-Nr. 4 394 386

600	167,0-175,0	620	100	130,0-170,0	300	25,0
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AC-Nr. 4 394 390

900	259,0-267,0	925	100	130,0-170,0	300	19,0-29,0
700	238,0-246,0					

AC-Nr. 4 394 428

1000	188,0-196,0	1025	100	130,0-170,0	300	25,0
800	180,0-187,0					

AC-Nr. 4 394 473

850	189,0-197,0	875	100	130,0-170,0	325	30,0
750	185,0-193,0					

AC-Nr. 4 394 501

900	175,0	925	100	130,0-170,0	300	19,0-25,0
700	158,0					

AC-Nr. 4 394 521

1000	239,0-247,0	1025	100	130,0-170,0	300	25,0
700	229,0-235,0					

AC-Nr. 4 394 527

900	161,0	925	100	130,0-170,0	300	19,0-25,0
800	151,0					

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 541								
1050	202,0-210,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 550								
1000	230,5-239,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 561								
1050	258,0	1060-1080			100	130,0-170,0	300	19,0-25,0
900	256,0							
AC-Nr. 4 394 564								
1050	244,0	1070			100	130,0-170,0	300	19,0-25,0
900	234,0							
AC-Nr. 4 394 569								
1000	203,0-211,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 590								
1050	260,5-271,0	1060-1080			100	130,0-170,0	300	19,0-25,0
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".								
AC-Nr. 4 394 593								
1050	251,5-261,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 703								
1050	260,5-271,0	1060-1080	900	267,0-278,0	100	130,0-170,0	300	19,0-25,0
			700	267,0-278,0				
Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".								
AC-Nr. 4 394 705								
"	4 394 706							
1050	258,0	1060-1080			100	130,0-170	300	19,0-25,0
900	256,0							
AC-Nr. 4 394 707								
1050	244,0	1070			100	130,0-170,0	300	19,0-25,0
900	234,0							
AC-Nr. 4 394 718								
955	198,0-213,0	965-975			100	130,0-170,0	300	21,0-27,0
800	196,0-210,0							
AC-Nr. 4 394 719								
875	166,0-168,0	915			100	130,0-170,0	300	21,0-27,0
600	142,5-146,5							
AC-Nr. 4 394 733								
1000	255,0-261,0	1020			100	130,0-170,0	300	19,0-25,0
800	272,0-278,0							
600	270,0-276,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full load delivery Control rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 740/741

1020	213,0-226,0	1030-1040
915	208,0-218,0	

AC-Nr. 4 394 744

1050	250,0	1060-1080	100	130,0-170,0	300	19,0-25,0
900	256,0					

AC-Nr. 4 394 745

950	208,0-214,0	990	100	130,0-170,0	300	21,0-27,0
750	196,0-202,0					

AC-Nr. 4 394 746

875	161,0-165,0	890	100	130,0-170,0	300	19,0-25,0
600	140,0-144,0					

AC-Nr. 4 394 771

800	113,0-119,0	820	100	130,0-170,0	300	19,0-25,0
600	102,0-108,0					

AC-Nr. 4 394 773

800	125,0-131,0	820	100	130,0-170,0	300	19,0-25,0
600	134,0-140,0					

AC-Nr. 4 394 775

1025	192,0-198,0	1045	100	130,0-170,0	300	19,0-25,0
900	180,0-186,0					

AC-Nr. 4 394 777

1000	200,0-206,0	1020	100	130,0-170,0	300	19,0-25,0
800	180,0-186,0					
600	189,0-195,0					

AC-Nr. 4 394 779

940	185,0-195,0	955-65	100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 781

1025	230,0-236,0	1040	100	130,0-170,0	300	19,0-25,0
900	207,0-213,0					
700	209,0-215,0					

AC-Nr. 4 394 783

1000	227,0-233,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					

AC-Nr. 4 394 785

1000	235,0-241,0	1020	100	130,0-170,0	300	19,0-25,0
700	263,0-269,0					



### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 787

1000	220,0-226,0	1020			100	130,0-170,0	300	19,0-25,0
800	209,0-215,0							
600	227,0-233,0							

AC-Nr. 4 394 789

910	190,0	930			100	130,0-170,0	300	25,0
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AC-Nr. 4 394 791

900	160,0-166,0	920			100	130,0-170,0	300	19,0-25,0
700	139,0-145,0							

AC-Nr. 4 394 793

600	124,0-130,0	620			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 795

700	127,0-133,0	720			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							

AC-Nr. 4 394 797

800	139,0-145,0	820			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							

AC-Nr. 4 394 799

925	157,0-163,0	945			100	130,0-170,0	300	19,0-25,0
800	145,0-151,0							
600	134,0-140,0							

AC-Nr. 4 394 801

1000	180,0-186,0	1020			100	130,0-170,0	300	19,0-25,0
800	154,0-160,0							
700	142,0-148,0							

AC-Nr. 4 394 803

1050	207,0-213,0	1070			100	130,0-170,0	300	19,0-25,0
900	161,0-175,0							
800	147,0-153,0							

AC-Nr. 4 394 805

900	187,0-193,0	920			100	130,0-170,0	300	27,0-33,0
700	162,0-168,0							

AC-Nr. 4 394 807

900	200,0-206,0	920			100	130,0-170,0	300	27,0-33,0
700	184,0-190,0							

AC-Nr. 4 394 809

900	203,0-209,0	920			100	130,0-170,0	300	19,0-25,0
700	209,0-215,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed rev/min (4a)	Fuel delivery characteristics (5a) high idle speed (5b) rev/min   cm <sup>3</sup> /1000 strokes		Starting fuel delivery idle switching point rev/min   cm <sup>3</sup> /1000 strokes (6)		Low idle speed (5) rev/min   Control rod travel mm	
1	2	3	4	5	6	7	8	9

-16-

AC-Nr. 4 394 811

750 185,0-191,0  
600 222,0-228,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0  
600 223,0-229,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0  
900 202,0-208,0  
700 207,0-213,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 817

1000 240,0-246,0  
800 224,0-230,0  
600 237,0-243,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 819

1050 245,0-251,0  
900 224,0-230,0  
700 237,0-243,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 821

1000 217,0-223,0  
800 197,0-203,0  
600 219,0-225,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 823

900 210,0-216,0  
700 212,0-218,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0  
900 281,0-287,0  
700 293,0-299,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 827

1050 234,0-240,0  
900 246,0-252,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 829

1050 262,0-268,0  
900 279,0-285,0  
700 289,0-295,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 831

1050 241,0-247,0  
900 265,0-271,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full load delivery Control rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Fuel delivery characteristics ⑤a high idle speed ⑤b		Starting fuel delivery idle switching point ⑥	Low idle speed ⑤		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 861								
1050	296,0-302,0	1070			100	130,0-170,0	300	19,0-25,0
900	301,0-307,0							
700	309,0-315,0							
AC-Nr. 4 394 863								
1050	253,0-256,0	1070			100	130,0-170,0	300	19,0-25,0
900	252,0-258,0							
700	269,0-275,0							
AC-Nr. 4 394 865								
1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							
AC-Nr. 4 394 867								
900	181,0-187,0	920			100	130,0-170,0	300	19,0-25,0
700	172,0-178,0							
AC-Nr. 4 394 869								
925	176,0-182,0	945			100	130,0-170,0	300	19,0-25,0
800	162,0-168,0							
700	177,0-183,0							
AC-Nr. 4 394 871								
900	173,0-179,0	920			100	130,0-170,0	300	19,0-25,0
800	160,0-166,0							
AC-Nr. 4 394 873								
925	237,0-243,0	945			100	130,0-170,0	300	27,0-33,0
800	251,0-257,0							
700	269,0-275,0							
AC-Nr. 4 394 875								
700	218,0-224,0	720			100	130,0-170,0	300	27,0-33,0
600	240,0-246,0							
AC-Nr. 4 394 877								
1050	213,0-219,0	1060-1080			100	130,0-170,0	300	19,0-25,0
900	212,0-218,0							
700	240,0-246,0							
AC-Nr. 4 394 879								
1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	19,0-25,0	
			700	258,5-269,5				
			600	255,5-266,0				

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 881

700 246,0 720 100 130,0-170,0 300 19,0-25,0  
600 263,0

AC-Nr. 4 394 883

1050 244,5-254,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 885

600 258,0 100 130,0-170,0 300 27,0

AC-Nr. 4 394 891

600 167,0-175,0 620 100 130,0-170,0 300 25,0

AC-Nr. 4 394 893

900 259,0-267,0 925 100 130,0-170,0 300 19,0-29,0  
700 238,0-246,0

AC-Nr. 4 394 895

1000 188,0-196,0 1025 100 130,0-170,0 300 25,0  
800 180,0-187,0

AC-Nr. 4 394 897

850 189,0-197,0 875 100 130,0-170,0 325 30,0  
750 185,0-193,0

AC-Nr. 4 394 899

900 175,0 925 100 130,0-170,0 300 19,0-25,0  
700 158,0

AC-Nr. 4 394 905

1000 239,0-247,0 1025 100 130,0-170,0 300 25,0  
700 229,0-235,0

AC-Nr. 4 394 907

900 161,0 925 100 130,0-170,0 300 19,0-25,0  
800 151,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 911

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 915

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

-20-

AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

# Test Specifications Fuel Injection Pumps ① and Governors

En

PE 6 P 120 A 420 LS 152 RQV 300...875 PA 112 KR  
0 401 846 239  
1 - 5 - 3 - 6 - 2 - 4

supersedes  
company Allis-Chalmers  
engine 16000-25000

Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8-2,9(2,75-2,95)mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	12	26,4 - 27,1			1,0	
200	6	4,2 - 5,2				

Adjust the fuel delivery from each outlet according to the values in

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## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm 6	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm 9	rev/min 10	mm 11
66°	875 900 980 1060	15,0-17,6 12,0-15,4 3,2- 8,0 0				10°	120 200 350 550	6,3-8,0 4,9-7,1 1,7-3,1 0	0-160 350 700 980 - 1050	Start 2,3-2,8 5,4-5,9 end

Torque control travel s = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ②b	Fuel delivery characteristics high idle speed ⑤b		Starting fuel delivery idle switching point ⑥		Torque-control travel ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

Checking values in brackets

\* 1 mm less control rod travel than col. 2



### C. Settings for Fuel injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

-2-

AC-Nr. 4 320 754								
1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 793								
1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 815								
900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 816								
900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 817								
1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 829								
1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 933								
900	102,0-110,0	1040	800	107,0-116,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 939								
900	98,5 ± 3	1040	700	107,5 ± 4	100	90,0-130,0	300	25,0
AC-Nr. 4 320 940								
900	78,0- 86,0	1040	700	100,0-109,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 941								
1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 942								
1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 980								
900	108,0-116,0	1120	800	-	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 981								
900	111,0-119,0	1020	800	112,0-118,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 016								
750	95,0-101,0	1020	750	95,0-101,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 064								
1000	112,0	1030	800	112,5	100	90,0-130,0	300	25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

-3-

AC-Nr. 4 359 816	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 826	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 828	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 359 830	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 832	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 392 693	1050	205,0-215,0	1065-80	900	167,0-177,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 695	900	149,0-155,0	920	-	-	-	-	300	19,0-25,0
AC-Nr. 4 392 697	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 699	800	210,0-218,0	£20	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 701	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 703	1050	220,0-230,0	1060-70	900 700	200,0-210,0 205,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 707	1050	243,0-253,0	1060-80	900 700	222,0-232,0 235,0-245,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 709	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 711	600	231,0-237,0	620	-	-	-	-	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④b	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 392 715								
1050	187,0-193,0	1070	900	174,0-180,0	100	130,0-170,0	300	19,0-25,0
			700	175,0-181,0				
AC-Nr. 4 392 717								
1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 719								
1050	200,0-206,0	1070	900	190,0-196,0	100	130,0-170,0	300	19,0-25,0
			700	214,0-220,0				
AC-Nr. 4 392 721								
1050	242,0-248,0	1070	900	220,0-226,0	100	130,0-170,0	300	19,0-25,0
			700	230,0-236,0				
AC-Nr. 4 392 723								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 725								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 727								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 729								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 731								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 392 735								
1050	239,0-245,0	1070	900	233,0-239,0	100	130,0-170,0	300	19,0-25,0
			700	273,0-279,0				
AC-Nr. 4 392 737								
1000	215,0-221,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
			600	220,0-226,0				
AC-Nr. 4 392 739								
1050	207,0-213,0	1050	900	195,0-201,0	100	130,0-170,0	300	19,0-25,0
			700	225,0-231,0				
AC-Nr. 4 392 741								
1050	213,0-219,0	1070	900	202,0-208,0	100	130,0-170,0	-	-
			700	230,0-236,0				
AC-Nr. 4 392 743								
1050	220,0-226,0	1070	900	210,0-216,0	100	130,0-170,0	300	19,0-25,0
			700	243,0-249,0				

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod trav. mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 392 747								
1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 749								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 750								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 768								
800	123,0-133,0	820	600	132,0-142,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 775/776								
875	162,0-164,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 777								
950	205,0-207,0	970	700	195,0-199,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 778								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 3 392 779								
1025	190,0-200,0	1030-40	1000 900	191,0-201,0 178,0-188,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 781								
1025	228,0-238,0	1050-60	900 700	205,0-215,0 207,0-217,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 953								
940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 095								
1050	211,0-221,0	1060-80	900 700	210,0-220,0 238,0-248,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 307								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 393 431								
1050	208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 821								
1050	242,0-248,0	1070	900 700	220,0-226,0 230,0-236,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed rev/min ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point rev/min ⑥   cm³/1000 strokes ⑥		Low idle speed ⑤ rev/min ⑧   Control rod travel mm ⑨	
1	2	3	1	2	6	7	8	9

AC-Nr. 4 393 823								
1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 825								
1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 827								
1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 829								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 831								
1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 393 833								
1050	264,0	1060-1080	900	280,5	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 835								
1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0,25,0
AC-Nr. 4 393 837								
1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 890								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 393 891								
955	208,0	965-975	895	203,0	-	-	-	-
AC-Nr. 4 393 961								
900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 001								
700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 017								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 020								
700	249,0-257,0	725	600	258,0-264,0	100	130,0-170,0	300	19,0-29,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 062	800	113,0-119,0	820	600	102,0-108,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 064	875	161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 066	800	125,0-131,0	820	600	134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 068	1025	192,0-198,0	1045	900	180,0-186,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 070	1000	200,0-206,0	1020	800 600	180,0-186,0 189,0-195,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 072	940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 074	1025	230,0-236,0	1040	900 700	207,0-213,0 209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 076	1000	227,0-233,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 078	1000	235,0-241,0	1020	700	263,0-269,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 080	1000	220,0-226,0	1020	800 600	209,0-215,0 227,0-233,0	100	130,0-170,0	300	19,0,25,0
AC-Nr. 4 394 082	910	190,0	930	-	-	100	130,0-170,0	300	25,0
AC-Nr. 4 394 084	900	160,0-166,0	920	700	139,0-145,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 086	600	124,0-130,0	620	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 088	700	127,0-133,0	720	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 090	800	139,0-145,0	820	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ Idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 092	925	157,0-163,0	945	800 600	145,0-151,0 134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 094	1000	180,0-186,0	1020	800 700	154,0-160,0 142,0-148,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 096	1050	207,0-213,0	1070	900 800	161,0-175,0 147,0-153,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 098	900	187,0-193,0	920	700	162,0-168,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 100	900	200,0-206,0	920	700	184,0-190,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 102	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 104	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 106	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 108	1050	222,0-228,0	1070	900 700	202,0-208,0 207,0-213,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 110	1000	240,0-246,0	1020	800 600	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 112	1050	245,0-251,0	1070	900 700	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 114	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 116	900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 118	1050	269,0-275,0	1070	900 700	281,0-287,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 394 120

1050 234,0-240,0 1070 900 246,0-252,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 122

1050 262,0-268,0 1070 900 279,0-285,0 100 130,0-170,0 300 19,0-25,0  
700 289,0-295,0

AC-Nr. 4 394 124

1050 241,0-247,0 1070 900 265,0-271,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 126

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 128

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 130

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 132

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 134

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 136

1000 255,0-261,0 1020 800 272,0-278,0 100 130,0-170,0 300 19,0-25,0  
600 270,0-276,0

AC-Nr. 4 394 138

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 394 140

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 394 142

900 222,0-228,0 920 700 254,0-260,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 144

1050 257,0-263,0 1070 750 272,0-278,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 148

1050 295,0-303,0 1075 900 309,0-315,0 100 130,0-170,0 300 25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ Idle switching point		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 394 150								
1050	268,0-274,0	1070	900 700	274,0-280,0 280,0-286,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 152								
1050	262,0-268,0	1070	900 700	257,0-273,0 267,0-273,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 154								
1050	279,0-285,0	1070	900 700	283,0-289,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 156								
1050	296,0-302,0	1070	900 700	301,0-307,0 309,0-315,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 158 " 4 394 157								
1050	253,0-256,0	1070	900 700	252,0-258,0 269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 160								
1050	208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 162								
900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 164								
925	176,0-182,0	945	800 700	162,0-168,0 177,0-183,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 166								
900	173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 168								
925	237,0-243,0	945	800 700	251,0-257,0 269,0-275,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 170								
700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 176								
1050	213,0-219,0	1070	900 700	212,0-218,0 240,0-246,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 246

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	300	19,0-25,0
			700	258,5-269,5				
			600	255,5-266,0				

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

700	246,0	720			100	130,0-170,0	300	19,0-25,0
600	263,0							

AC-Nr. 4 394 250

1050	244,5-254,5	1060-1080			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 257

600	258,0				100	130,0-170,0	300	27,0
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AC-Nr. 4 394 314

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 331

1050	241,0-247,0	1070			100	130,0-170,0	300	19,0-25,0
900	265,0-271,0							
700	268,0-274,0							

AC-Nr. 4 394 332

1050	268,0-274,0	1070			100	130,0-170,0	300	19,0-25,0
900	274,0-280,0							
700	280,0-286,0							

AC-Nr. 4 394 347

1050	269,0-275,0	1070			100	130,0-170,0	300	19,0-25,0
900	281,0-287,0							
700	293,0-299,0							

AC-Nr. 4 394 348

1050	234,0-240,0	1070			100	130,0-170,0	300	19,0-25,0
900	246,0-252,0							
700	268,0-274,0							

AC-Nr. 4 394 349

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 350

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	279,0-285,0							
700	289,0-295,0							

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway intermediate speed (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min (4a)	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 351

1050	253,0-256,0	1070			100	130,0-170,0	300	19,0-25,0
900	252,0-258,0							
700	269,0-275,0							

AC-Nr. 4 394 352

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	267,0-273,0							
700	267,0-273,0							

AC-Nr. 4 394 353

1050	279,0-285,0	1070			100	130,0-170,0	300	19,0-25,0
900	283,0-289,0							
700	293,0-299,0							

AC-Nr. 4 394 354

1050	296,0-302,0	1070			100	130,0-170,0	300	19,0-25,0
900	301,0-307,0							
700	309,0-315,0							

AC-Nr. 4 394 356

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 386

600	167,0-175,0	620			100	130,0-170,0	300	25,0
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AC-Nr. 4 394 390

900	259,0-267,0	925			100	130,0-170,0	300	19,0-29,0
700	238,0-246,0							

AC-Nr. 4 394 428

1000	188,0-196,0	1025			100	130,0-170,0	300	25,0
800	180,0-187,0							

AC-Nr. 4 394 473

850	189,0-197,0	875			100	130,0-170,0	325	30,0
750	185,0-193,0							

AC-Nr. 4 394 501

900	175,0	925			100	130,0-170,0	300	19,0-25,0
700	158,0							

AC-Nr. 4 394 521

1000	239,0-247,0	1025			100	130,0-170,0	300	25,0
700	229,0-235,0							

AC-Nr. 4 394 527

900	161,0	925			100	130,0-170,0	300	19,0-25,0
800	151,0							

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Fuel delivery characteristics ⑤a high idle speed ⑤b		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm³/1000 strokes	rev/min	rev/min	cm³/1000 strokes	rev/min	cm³/1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 541								
1050	202,0-210,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 550								
1000	230,5-239,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 561								
1050	258,0	1060-1080			100	130,0-170,0	300	19,0-25,0
900	256,0							
AC-Nr. 4 394 564								
1050	244,0	1070			100	130,0-170,0	300	19,0-25,0
900	234,0							
AC-Nr. 4 394 569								
1000	203,0-211,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 590								
1050	260,5-271,0	1060-1080			100	130,0-170,0	300	19,0-25,0
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".								
AC-Nr. 4 394 593								
1050	251,5-261,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 703								
1050	260,5-271,0	1060-1080	900	267,0-278,0	100	130,0-170,0	300	19,0-25,0
			700	267,0-278,0				
Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".								
AC-Nr. 4 394 705								
" 4 394 706								
1050	258,0	1060-1080			100	130,0-170	300	19,0-25,0
900	256,0							
AC-Nr. 4 394 707								
1050	244,0	1070			100	130,0-170,0	300	19,0-25,0
900	234,0							
AC-Nr. 4 394 718								
955	198,0-213,0	965-975			100	130,0-170,0	300	21,0-27,0
800	196,0-210,0							
AC-Nr. 4 394 719								
875	166,0-168,0	915			100	130,0-170,0	300	21,0-27,0
600	142,5-146,5							
AC-Nr. 4 394 733								
1000	255,0-261,0	1020			100	130,0-170,0	300	19,0-25,0
800	272,0-278,0							
600	270,0-276,0							

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 740/741

1020	213,0-226,0	1030-1040
915	208,0-218,0	

AC-Nr. 4 394 744

1050	250,0	1060-1080	100	130,0-170,0	300	19,0-25,0
900	256,0					

AC-Nr. 4 394 745

950	208,0-214,0	990	100	130,0-170,0	300	21,0-27,0
750	196,0-202,0					

AC-Nr. 4 394 746

875	161,0-165,0	890	100	130,0-170,0	300	19,0-25,0
600	140,0-144,0					

AC-Nr. 4 394 771

800	113,0-119,0	820	100	130,0-170,0	300	19,0-25,0
600	102,0-108,0					

AC-Nr. 4 394 773

800	125,0-131,0	820	100	130,0-170,0	300	19,0-25,0
600	134,0-140,0					

AC-Nr. 4 394 775

1025	192,0-198,0	1045	100	130,0-170,0	300	19,0-25,0
900	180,0-186,0					

AC-Nr. 4 394 777

1000	200,0-206,0	1020	100	130,0-170,0	300	19,0-25,0
800	180,0-186,0					
600	189,0-195,0					

AC-Nr. 4 394 779

940	185,0-195,0	955-65	100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 781

1025	230,0-236,0	1040	100	130,0-170,0	300	19,0-25,0
900	207,0-213,0					
700	209,0-215,0					

AC-Nr. 4 394 783

1000	227,0-233,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					

AC-Nr. 4 394 785

1000	235,0-241,0	1020	100	130,0-170,0	300	19,0-25,0
700	263,0-269,0					

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 787								
1000	220,0-226,0	1020			100	130,0-170,0	300	19,0-25,0
800	209,0-215,0							
600	227,0-233,0							
AC-Nr. 4 394 789								
910	190,0	930			100	130,0-170,0	300	25,0
AC-Nr. 4 394 791								
900	160,0-166,0	920			100	130,0-170,0	300	19,0-25,0
700	139,0-145,0							
AC-Nr. 4 394 793								
600	124,0-130,0	620			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 795								
700	127,0-133,0	720			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							
AC-Nr. 4 394 797								
800	139,0-145,0	820			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							
AC-Nr. 4 394 799								
925	157,0-163,0	945			100	130,0-170,0	300	19,0-25,0
800	145,0-151,0							
600	134,0-140,0							
AC-Nr. 4 394 801								
1000	180,0-186,0	1020			100	130,0-170,0	300	19,0-25,0
800	154,0-160,0							
700	142,0-148,0							
AC-Nr. 4 394 803								
1050	207,0-213,0	1070			100	130,0-170,0	300	19,0-25,0
900	161,0-175,0							
800	147,0-153,0							
AC-Nr. 4 394 805								
900	187,0-193,0	920			100	130,0-170,0	300	27,0-33,0
700	162,0-168,0							
AC-Nr. 4 394 807								
900	200,0-206,0	920			100	130,0-170,0	300	27,0-33,0
700	184,0-190,0							
AC-Nr. 4 394 809								
900	203,0-209,0	920			100	130,0-170,0	300	19,0-25,0
700	209,0-215,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5c) Control rod travel mm	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min (4a)	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 811

750 185,0-191,0 770 100 130,0-170,0 300 19,0-25,0  
600 222,0-228,0

AC-Nr. 4 394 813

800 210,0-218,0 820 100 130,0-170,0 300 19,0-25,0  
600 223,0-229,0

AC-Nr. 4 394 815

1050 222,0-228,0 1070 100 130,0-170,0 300 19,0-25,0  
900 202,0-208,0  
700 207,0-213,0

AC-Nr. 4 394 817

1000 240,0-246,0 1020 100 130,0-170,0 300 19,0-25,0  
800 224,0-230,0  
600 237,0-243,0

AC-Nr. 4 394 819

1050 245,0-251,0 1070 100 130,0-170,0 300 19,0-25,0  
900 224,0-230,0  
700 237,0-243,0

AC-Nr. 4 394 821

1000 217,0-223,0 1020 100 130,0-170,0 300 19,0-25,0  
800 197,0-203,0  
600 219,0-225,0

AC-Nr. 4 394 823

900 210,0-216,0 920 100 130,0-170,0 300 27,0-33,0  
700 212,0-218,0

AC-Nr. 4 394 825

1050 269,0-275,0 1070 100 130,0-170,0 300 19,0-25,0  
900 281,0-287,0  
700 293,0-299,0

AC-Nr. 4 394 827

1050 234,0-240,0 1070 100 130,0-170,0 300 19,0-25,0  
900 246,0-252,0  
700 268,0-274,0

AC-Nr. 4 394 829

1050 262,0-268,0 1070 100 130,0-170,0 300 19,0-25,0  
900 279,0-285,0  
700 289,0-295,0

AC-Nr. 4 394 831

1050 241,0-247,0 1070 100 130,0-170,0 300 19,0-25,0  
900 265,0-271,0  
700 268,0-274,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a) rev/min	Fuel delivery characteristics (5a) high idle speed (5b) rev/min   cm <sup>3</sup> /1000 strokes		Starting fuel delivery idle switching point (6) rev/min   cm <sup>3</sup> /1000 strokes		Low idle speed (5) Control rod travel mm rev/min	
1	2	3	4	5	6	7	8	9

-17-

AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

G13

G 13

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min (1)	cm <sup>3</sup> /1000 strokes (2)	rev/min (3)	rev/min (4)	cm <sup>3</sup> /1000 strokes (5)	rev/min (6)	cm <sup>3</sup> /1000 strokes (7)	rev/min (8)	Control rod travel mm (9)

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AC-Nr. 4 394 861

1050	296,0-302,0	1070			100	130,0-170,0	300	19,0-25,0
900	301,0-307,0							
700	309,0-315,0							

AC-Nr. 4 394 863

1050	253,0-256,0	1070			100	130,0-170,0	300	19,0-25,0
900	252,0-258,0							
700	269,0-275,0							

AC-Nr. 4 394 865

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 867

900	181,0-187,0	920			100	130,0-170,0	300	19,0-25,0
700	172,0-178,0							

AC-Nr. 4 394 869

925	176,0-182,0	945			100	130,0-170,0	300	19,0-25,0
800	162,0-168,0							
700	177,0-183,0							

AC-Nr. 4 394 871

900	173,0-179,0	920			100	130,0-170,0	300	19,0-25,0
800	160,0-166,0							

AC-Nr. 4 394 873

925	237,0-243,0	945			100	130,0-170,0	300	27,0-33,0
800	251,0-257,0							
700	269,0-275,0							

AC-Nr. 4 394 875

700	218,0-224,0	720			100	130,0-170,0	300	27,0-33,0
600	240,0-246,0							

AC-Nr. 4 394 877

1050	213,0-219,0	1060-1080			100	130,0-170,0	300	19,0-25,0
900	212,0-218,0							
700	240,0-246,0							

AC-Nr. 4 394 879

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	19,0-25,0
			700	258,5-269,5			
			600	255,5-266,0			

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 881

700 246,0 720 100 130,0-170,0 300 19,0-25,0  
600 263,0

AC-Nr. 4 394 883

1050 244,5-254,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 885

600 258,0 100 130,0-170,0 300 27,0

AC-Nr. 4 394 891

600 167,0-175,0 620 100 130,0-170,0 300 25,0

AC-Nr. 4 394 893

900 259,0-267,0 925 100 130,0-170,0 300 19,0-29,0  
700 238,0-246,0

AC-Nr. 4 394 895

1000 188,0-196,0 1025 100 130,0-170,0 300 25,0  
800 180,0-187,0

AC-Nr. 4 394 897

850 189,0-197,0 875 100 130,0-170,0 325 30,0  
750 185,0-193,0

AC-Nr. 4 394 899

900 175,0 925 100 130,0-170,0 300 19,0-25,0  
700 158,0

AC-Nr. 4 394 905

1000 239,0-247,0 1025 100 130,0-170,0 300 25,0  
700 229,0-235,0

AC-Nr. 4 394 907

900 161,0 925 100 130,0-170,0 300 19,0-25,0  
800 151,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 911

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 915

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

# Test Specifications Fuel Injection Pumps ① and Governors

En

PE 6 P 120 A 420 LS 152  
0 401 846 223  
1 - 5 - 3 - 6 - 2 - 4

RQV 300...950 PA 112 KR

supersedes  
company Allis-Chalmers  
engine: 16000-25000  
Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8-2,9(2,75-2,95)mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	12	26,4 - 27,1			1,0	
200	6	4,2 - 5,2				

Adjust the fuel delivery from each outlet according to the values in

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## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel ①		
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	①a	Degree of deflection of control lever 4	rev/min mm ④	Control rod travel mm ③	Degree of deflection of control lever 7	rev/min mm ③	rev/min mm 10	mm 11	
66°	1050 1100 1150 1210 1300	15,0-18,0 10,7-15,0 6,0-11,6 0- 7,0 0					10°	250 350 450 550	6,4-8,0 3,0-5,2 1,3-2,8 0	180- 260 400 550 1000 1200- 1290	Start 1,8-2,7 3,8-4,2 7,5-7,9 End

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ②b		Fuel delivery characteristics high idle speed ⑤b		Starting fuel delivery idle switching point ⑥		Torque-control travel ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	④a	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

Checking values in brackets

\* 1 mm less control rod travel than col. 2

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b Intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery Idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

-2-

AC-Nr. 4 320 754	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 793	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 815	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 816	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 817	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 829	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 933	900	102,0-110,0	1040	800	107,0-116,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 939	900	98,5 ± 3	1040	700	107,5 ± 4	100	90,0-130,0	300	25,0
AC-Nr. 4 320 940	900	78,0- 86,0	1040	700	100,0-109,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 941	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 942	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 980	900	108,0-116,0	1120	800	-	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 981	900	111,0-119,0	1020	800	112,0-118,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 016	750	95,0-101,0	1020	750	95,0-101,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 064	1000	112,0	1030	800	112,5	100	90,0-130,0	300	25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

-3-

AC-Nr. 4 359 816	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 826	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 828	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 359 830	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 832	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 392 693	1050	205,0-215,0	1065-80	900	167,0-177,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 695	900	149,0-155,0	920	-	-	-	-	300	19,0-25,0
AC-Nr. 4 392 697	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 699	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 701	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 703	1050	220,0-230,0	1060-70	900 700	200,0-210,0 205,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 707	1050	243,0-253,0	1060-80	900 700	222,0-232,0 235,0-245,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 709	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 711	600	231,0-237,0	620	-	-	-	-	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 392 715								
1050	187,0-193,0	1070	900	174,0-180,0	100	130,0-170,0	300	19,0-25,0
			700	175,0-181,0				
AC-Nr. 4 392 717								
1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 719								
1050	200,0-206,0	1070	900	190,0-196,0	100	130,0-170,0	300	19,0-25,0
			700	214,0-220,0				
AC-Nr. 4 392 721								
1050	242,0-248,0	1070	900	220,0-226,0	100	130,0-170,0	300	19,0-25,0
			700	230,0-236,0				
AC-Nr. 4 392 723								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 725								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 727								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 729								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 731								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 392 735								
1050	239,0-245,0	1070	900	233,0-239,0	100	130,0-170,0	300	19,0-25,0
			700	273,0-279,0				
AC-Nr. 4 392 737								
1000	215,0-221,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
			600	220,0-226,0				
AC-Nr. 4 392 739								
1050	207,0-213,0	1050	900	195,0-201,0	100	130,0-170,0	300	19,0-25,0
			700	225,0-231,0				
AC-Nr. 4 392 741								
1050	213,0-219,0	1070	900	202,0-208,0	100	130,0-170,0	-	-
			700	230,0-236,0				
AC-Nr. 4 392 743								
1050	220,0-226,0	1070	900	210,0-216,0	100	130,0-170,0	300	19,0-25,0
			700	243,0-249,0				

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

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AC-Nr. 4 392 747								
1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 749								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 750								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 768								
800	123,0-133,0	820	600	132,0-142,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 775/776								
875	162,0-164,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 777								
950	205,0-207,0	970	700	195,0-199,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 778								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 3 392 779								
1025	190,0-200,0	1030-40	1000 900	191,0-201,0 178,0-188,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 781								
1025	228,0-238,0	1050-60	900 700	205,0-215,0 207,0-217,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 953								
940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 095								
1050	211,0-221,0	1060-80	900 700	210,0-220,0 238,0-248,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 307								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 393 431								
1050	208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 821								
1050	242,0-248,0	1070	900 700	220,0-226,0 230,0-236,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed rev/min (4a)	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Starting fuel delivery rate switching point (6)		Low idle speed (5) Control rod travel mm	
rev/min	cm <sup>3</sup> /1000 strokes	3	1	2	6	7	8	9

AC-Nr. 4 393 823	1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 825	1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 827	1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 829	1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 831	1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 393 833	1050	204,0	1060-1080	900	280,5	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 835	1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 837	1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 890	950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 393 891	955	208,0	965-975	895	203,0	-	-	-	-
AC-Nr. 4 393 961	900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 001	700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 017	950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 020	700	249,0-257,0	725	600	258,0-264,0	100	130,0-170,0	300	19,0-29,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

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AC-Nr. 4 394 062	800	113,0-119,0	820	600	102,0-108,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 064	875	161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 066	800	125,0-131,0	820	600	134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 068	1025	192,0-198,0	1045	900	180,0-186,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 070	1000	200,0-206,0	1020	800 600	180,0-186,0 189,0-195,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 072	940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 074	1025	230,0-236,0	1040	900 700	207,0-213,0 209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 076	1000	227,0-233,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 078	1000	235,0-241,0	1020	700	263,0-269,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 080	1000	220,0-226,0	1020	800 600	209,0-215,0 227,0-233,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 082	910	190,0	930	-	-	100	130,0-170,0	300	25,0
AC-Nr. 4 394 084	900	160,0-166,0	920	700	139,0-145,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 086	600	124,0-130,0	620	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 088	700	127,0-133,0	720	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 090	800	139,0-145,0	820	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm³/1000 strokes	rev/min	rev/min	cm³/1000 strokes	rev/min	cm³/1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 092	925	157,0-163,0	945	800 600	145,0-151,0 134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 094	1000	180,0-186,0	1020	800 700	154,0-160,0 142,0-148,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 096	1050	207,0-213,0	1070	900 800	161,0-175,0 147,0-153,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 098	900	187,0-193,0	920	700	162,0-168,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 100	900	200,0-206,0	920	700	184,0-190,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 102	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 104	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 106	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 108	1050	222,0-228,0	1070	900 700	202,0-208,0 207,0-213,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 110	1000	240,0-246,0	1020	800 600	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 112	1050	245,0-251,0	1070	900 700	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 114	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 116	900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 118	1050	269,0-275,0	1070	900 700	281,0-287,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery (2) Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery (6) idle switching point		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 120								
1050	234,0-240,0	1070	900 700	246,0-252,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 122								
1050	262,0-268,0	1070	900 700	279,0-285,0 289,0-295,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 124								
1050	241,0-247,0	1070	900 700	265,0-271,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 126								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 128								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 130								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 132								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 134								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 136								
1000	255,0-261,0	1020	800 600	272,0-278,0 270,0-276,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 138								
1050	239,0-245,0	1070	900 700	233,0-239,0 273,0-279,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 140								
1000	215,0-221,0	1020	800 600	197,0-203,0 220,0-226,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 142								
900	222,0-228,0	920	700	254,0-260,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 144								
1050	257,0-263,0	1070	750	272,0-278,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 148								
1050	295,0-303,0	1075	900	309,0-315,0	100	130,0-170,0	300	25,0

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) <span style="float: right;">(2)</span>		Breakaway <span style="float: right;">(2b)</span> intermediate speed <span style="float: right;">(4a)</span>	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) <span style="float: right;">(2)</span>		Starting fuel delivery idle switching point <span style="float: right;">(6)</span>		Low idle speed <span style="float: right;">(5)</span>	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 394 150								
1050	268,0-274,0	1070	900 700	274,0-280,0 280,0-286,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 152								
1050	262,0-268,0	1070	900 700	267,0-273,0 267,0-273,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 154								
1050	279,0-285,0	1070	900 700	283,0-289,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 156								
1050	296,0-302,0	1070	900 700	301,0-307,0 309,0-315,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 158								
" 4 394 157								
1050	253,0-256,0	1070	900 700	252,0-258,0 269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 160								
1050	208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 162								
900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 164								
925	176,0-182,0	945	800 700	162,0-168,0 177,0-183,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 166								
900	173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 168								
925	237,0-243,0	945	800 700	251,0-257,0 269,0-275,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 170								
700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 176								
1050	213,0-219,0	1070	900 700	212,0-218,0 240,0-246,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min (4a)	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 246

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	300	19,0-25,0
			700	258,5-269,5				
			600	255,5-266,0				

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

700	246,0	720			100	130,0-170,0	300	19,0-25,0
600	263,0							

AC-Nr. 4 394 250

1050	244,5-254,5	1060-1080			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 257

600	258,0				100	130,0-170,0	300	27,0
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AC-Nr. 4 394 314

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 331

1050	241,0-247,0	1070			100	130,0-170,0	300	19,0-25,0
900	265,0-271,0							
700	268,0-274,0							

AC-Nr. 4 394 332

1050	268,0-274,0	1070			100	130,0-170,0	300	19,0-25,0
900	274,0-280,0							
700	280,0-286,0							

AC-Nr. 4 394 347

1050	269,0-275,0	1070			100	130,0-170,0	300	19,0-25,0
900	281,0-287,0							
700	293,0-299,0							

AC-Nr. 4 394 348

1050	234,0-240,0	1070			100	130,0-170,0	300	19,0-25,0
900	246,0-252,0							
700	268,0-274,0							

AC-Nr. 4 394 349

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 350

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	279,0-285,0							
700	289,0-295,0							

H3

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery Idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 351

1050	253,0-256,0	1070	100	130,0-170,0	300	19,0-25,0
900	252,0-258,0					
700	269,0-275,0					

AC-Nr. 4 394 352

1050	262,0-268,0	1070	100	130,0-170,0	300	19,0-25,0
900	267,0-273,0					
700	267,0-273,0					

AC-Nr. 4 394 353

1050	279,0-285,0	1070	100	130,0-170,0	300	19,0-25,0
900	283,0-289,0					
700	293,0-299,0					

AC-Nr. 4 394 354

1050	296,0-302,0	1070	100	130,0-170,0	300	19,0-25,0
900	301,0-307,0					
700	309,0-315,0					

AC-Nr. 4 394 356

1050	246,0	1070	100	130,0-170,0	300	19,0-25,0
900	240,0					
700	267,0					

AC-Nr. 4 394 386

600	167,0-175,0	620	100	130,0-170,0	300	25,0
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AC-Nr. 4 394 390

900	259,0-267,0	925	100	130,0-170,0	300	19,0-29,0
700	238,0-246,0					

AC-Nr. 4 394 428

1000	188,0-196,0	1025	100	130,0-170,0	300	25,0
800	180,0-187,0					

AC-Nr. 4 394 473

850	189,0-197,0	875	100	130,0-170,0	325	30,0
750	185,0-193,0					

AC-Nr. 4 394 501

900	175,0	925	100	130,0-170,0	300	19,0-25,0
700	158,0					

AC-Nr. 4 394 521

1000	239,0-247,0	1025	100	130,0-170,0	300	25,0
700	229,0-235,0					

AC-Nr. 4 394 527

900	161,0	925	100	130,0-170,0	300	19,0-25,0
800	151,0					

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) inmediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 541

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593

1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705

" 4 394 706

1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719

875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733

1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

**Testoil-ISO 4113**



### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 740/741

1020	213,0-226,0	1030-1040
915	208,0-218,0	

AC-Nr. 4 394 744

1050	250,0	1060-1080	100	130,0-170,0	300	19,0-25,0
900	256,0					

AC-Nr. 4 394 745

950	208,0-214,0	990	100	130,0-170,0	300	21,0-27,0
750	196,0-202,0					

AC-Nr. 4 394 746

875	161,0-165,0	890	100	130,0-170,0	300	19,0-25,0
600	140,0-144,0					

AC-Nr. 4 394 771

800	113,0-119,0	820	100	130,0-170,0	300	19,0-25,0
600	102,0-108,0					

AC-Nr. 4 394 773

800	125,0-131,0	820	100	130,0-170,0	300	19,0-25,0
600	134,0-140,0					

AC-Nr. 4 394 775

1025	192,0-198,0	1045	100	130,0-170,0	300	19,0-25,0
900	180,0-186,0					

AC-Nr. 4 394 777

1000	200,0-206,0	1020	100	130,0-170,0	300	19,0-25,0
800	180,0-186,0					
600	189,0-195,0					

AC-Nr. 4 394 779

940	185,0-195,0	955-65	100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 781

1025	230,0-236,0	1040	100	130,0-170,0	300	19,0-25,0
900	207,0-213,0					
700	209,0-215,0					

AC-Nr. 4 394 783

1000	227,0-233,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					

AC-Nr. 4 394 785

1000	235,0-241,0	1020	100	130,0-170,0	300	19,0-25,0
700	263,0-269,0					

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway intermediate speed (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 787

1000	220,0-226,0	1020	100	130,0-170,0	300	19,0-25,0
800	209,0-215,0					
600	227,0-233,0					

AC-Nr. 4 394 789

910	190,0	930	100	130,0-170,0	300	25,0
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AC-Nr. 4 394 791

900	160,0-166,0	920	100	130,0-170,0	300	19,0-25,0
700	139,0-145,0					

AC-Nr. 4 394 793

600	124,0-130,0	620	100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 795

700	127,0-133,0	720	100	130,0-170,0	300	19,0-25,0
600	124,0-130,0					

AC-Nr. 4 394 797

800	139,0-145,0	820	100	130,0-170,0	300	19,0-25,0
600	124,0-130,0					

AC-Nr. 4 394 799

925	157,0-163,0	945	100	130,0-170,0	300	19,0-25,0
800	145,0-151,0					
600	134,0-140,0					

AC-Nr. 4 394 801

1000	180,0-186,0	1020	100	130,0-170,0	300	19,0-25,0
800	154,0-160,0					
700	142,0-148,0					

AC-Nr. 4 394 803

1050	207,0-213,0	1070	100	130,0-170,0	300	19,0-25,0
900	161,0-175,0					
800	147,0-153,0					

AC-Nr. 4 394 805

900	187,0-193,0	920	100	130,0-170,0	300	27,0-33,0
700	162,0-168,0					

AC-Nr. 4 394 807

900	200,0-206,0	920	100	130,0-170,0	300	27,0-33,0
700	184,0-190,0					

AC-Nr. 4 394 809

900	203,0-209,0	920	100	130,0-170,0	300	19,0-25,0
700	209,0-215,0					

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway intermediate speed (2b)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 811

750 185,0-191,0 770 100 130,0-170,0 300 19,0-25,0  
600 222,0-228,0

AC-Nr. 4 394 813

800 210,0-218,0 820 100 130,0-170,0 300 19,0-25,0  
600 223,0-229,0

AC-Nr. 4 394 815

1050 222,0-228,0 1070 100 130,0-170,0 300 19,0-25,0  
900 202,0-208,0  
700 207,0-213,0

AC-Nr. 4 394 817

1000 240,0-246,0 1020 100 130,0-170,0 300 19,0-25,0  
800 224,0-230,0  
600 237,0-243,0

AC-Nr. 4 394 819

1050 245,0-251,0 1070 100 130,0-170,0 300 19,0-25,0  
900 224,0-230,0  
700 237,0-243,0

AC-Nr. 4 394 821

1000 217,0-223,0 1020 100 130,0-170,0 300 19,0-25,0  
800 197,0-203,0  
600 219,0-225,0

AC-Nr. 4 394 823

900 210,0-216,0 920 100 130,0-170,0 300 27,0-33,0  
700 212,0-218,0

AC-Nr. 4 394 825

1050 269,0-275,0 1070 100 130,0-170,0 300 19,0-25,0  
900 281,0-287,0  
700 293,0-299,0

AC-Nr. 4 394 827

1050 234,0-240,0 1070 100 130,0-170,0 300 19,0-25,0  
900 246,0-252,0  
700 268,0-274,0

AC-Nr. 4 394 829

1050 262,0-268,0 1070 100 130,0-170,0 300 19,0-25,0  
900 279,0-285,0  
700 289,0-295,0

AC-Nr. 4 394 831

1050 241,0-247,0 1070 100 130,0-170,0 300 19,0-25,0  
900 265,0-271,0  
700 268,0-274,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

-17-

AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control-rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 861

1050	296,0-302,0	1070	100	130,0-170,0	300	19,0-25,0
900	301,0-307,0					
700	309,0-315,0					

AC-Nr. 4 394 863

1050	253,0-256,0	1070	100	130,0-170,0	300	19,0-25,0
900	252,0-258,0					
700	269,0-275,0					

AC-Nr. 4 394 865

1050	208,0-214,0	1070	100	130,0-170,0	300	19,0-25,0
900	230,0-236,0					
700	260,0-266,0					

AC-Nr. 4 394 867

900	181,0-187,0	920	100	130,0-170,0	300	19,0-25,0
700	172,0-178,0					

AC-Nr. 4 394 869

925	176,0-182,0	945	100	130,0-170,0	300	19,0-25,0
800	162,0-168,0					
700	177,0-183,0					

AC-Nr. 4 394 871

900	173,0-179,0	920	100	130,0-170,0	300	19,0-25,0
800	160,0-166,0					

AC-Nr. 4 394 873

925	237,0-243,0	945	100	130,0-170,0	300	27,0-33,0
800	251,0-257,0					
700	269,0-275,0					

AC-Nr. 4 394 875

700	218,0-224,0	720	100	130,0-170,0	300	27,0-33,0
600	240,0-246,0					

AC-Nr. 4 394 877

1050	213,0-219,0	1060-1080	100	130,0-170,0	300	19,0-25,0
900	212,0-218,0					
700	240,0-246,0					

AC-Nr. 4 394 879

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	19,0-25,0
			700	258,5-269,5			
			600	255,5-266,0			

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 881

700 246,0 720 100 130,0-170,0 300 19,0-25,0  
600 263,0

AC-Nr. 4 394 883

1050 244,5-254,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 885

600 258,0 100 130,0-170,0 300 27,0

AC-Nr. 4 394 891

600 167,0-175,0 620 100 130,0-170,0 300 25,0

AC-Nr. 4 394 893

900 259,0-267,0 925 100 130,0-170,0 300 19,0-29,0  
700 238,0-246,0

AC-Nr. 4 394 895

1000 188,0-196,0 1025 100 130,0-170,0 300 25,0  
800 180,0-187,0

AC-Nr. 4 394 897

850 189,0-197,0 875 100 130,0-170,0 325 30,0  
750 185,0-193,0

AC-Nr. 4 394 899

900 175,0 925 100 130,0-170,0 300 19,0-25,0  
700 158,0

AC-Nr. 4 394 905

1000 239,0-247,0 1025 100 130,0-170,0 300 25,0  
700 229,0-235,0

AC-Nr. 4 394 907

900 161,0 925 100 130,0-170,0 300 19,0-25,0  
800 151,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 911

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 915

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
 Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
 700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
 Adjust stop part position to obtain mean curve above.  
 Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
 900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
 800 160,0-166,0

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 ALO 16,0 c

En

PE 6 P 120/420 LS 152 RQV 300...800 PA 175 KR  
0 401 846 242 ; 0 401 846 243  
1 - 5 - 3 - 6 - 2 - 4

supersedes  
company Allis-Chalmers  
engine 16000-25000

Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	12	26,4 - 27,1			1,0	
600	6	8,6 - 9,8				
	12	26,3 - 28,2				
200	15	33,8 - 36,2				
	6	4,2 - 5,2				

Adjust the fuel delivery from each outlet according to the values in

Testoil-ISO 4113

## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm 6	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm 9	rev/min 10	mm 11
66°	875 900 980 1060	15,0-17,6 12,9-15,4 3,2- 8,0 0				10°	120 200 350 550	6,3-8,0 4,9-7,1 1,7-3,1 0		

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ②b	Fuel delivery characteristics ⑤a		Starting fuel delivery idle switching point ⑥		Torque-control travel ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

Checking values in brackets

\* 1 mm less control rod travel than col. 2



### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 320 754	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 793	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 815	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 816	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 817	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 829	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 933	900	102,0-110,0	1040	800	107,0-116,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 939	900	98,5 ± 3	1040	700	107,5 ± 4	100	90,0-130,0	300	25,0
AC-Nr. 4 320 940	900	78,0- 86,0	1040	700	100,0-109,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 941	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 942	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 980	900	108,0-116,0	1120	800	-	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 981	900	111,0-119,0	1020	800	112,0-118,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 016	750	95,0-101,0	1020	750	95,0-101,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 064	1000	112,0	1030	800	112,5	100	90,0-130,0	300	25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery (2) Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

-3-

AC-Nr. 4 359 816								
900	100,0-106,0	910-920	700	101,0-107,0	100	90,0-130,0	300	19,0-25,0
			600	111,0-117,0				
AC-Nr. 4 359 826								
900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 828								
1100	139,0-143,0	1120	800	149,0-154,0	100	90,0-130,0	375	9,0-19,0
			600	153,0-161,0				
AC-Nr. 4 359 830								
1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 832								
1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 392 693								
1050	205,0-215,0	1065-80	900	167,0-177,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 695								
900	149,0-155,0	920	-	-	-	-	300	19,0-25,0
AC-Nr. 4 392 697								
750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 699								
800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 701								
900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 703								
1050	220,0-230,0	1060-70	900	200,0-210,0	100	130,0-170,0	300	19,0-25,0
			700	205,0-215,0				
AC-Nr. 4 392 707								
1050	243,0-253,0	1060-80	900	222,0-232,0	100	130,0-170,0	300	19,0-25,0
			700	235,0-245,0				
AC-Nr. 4 392 709								
1000	217,0-223,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
			600	219,0-225,0				
AC-Nr. 4 392 711								
600	231,0-237,0	620	-	-	-	-	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery Idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

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AC-Nr. 4 392 715								
1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 717								
1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 719								
1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 721								
1050	242,0-248,0	1070	900 700	220,0-226,0 230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 723								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 725								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 727								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 729								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 731								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 392 735								
1050	239,0-245,0	1070	900 700	233,0-239,0 273,0-279,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 737								
1000	215,0-221,0	1020	800 600	197,0-203,0 220,0-226,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 739								
1050	207,0-213,0	1050	900 700	195,0-201,0 225,0-231,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 741								
1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 392 743								
1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

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AC-Nr. 4 392 747								
1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 749								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 750								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 768								
800	123,0-133,0	820	600	132,0-142,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 775/776								
875	162,0-164,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 777								
950	205,0-207,0	970	700	195,0-199,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 778								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 3 392 779								
1025	190,0-200,0	1030-40	1000 900	191,0-201,0 178,0-188,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 781								
1025	228,0-238,0	1050-60	900 700	205,0-215,0 207,0-217,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 953								
940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 095								
1050	211,0-221,0	1060-80	900 700	210,0-220,0 238,0-248,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 307								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 393 431								
1050	208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 821								
1050	242,0-248,0	1070	900 700	220,0-226,0 230,0-236,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

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AC-Nr. 4 393 823	1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 825	1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 827	1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 829	1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 831	1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 393 833	1050	264,0	1060-1080	900	280,5	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 835	1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 837	1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 890	950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 393 891	955	208,0	965-975	895	203,0	-	-	-	-
AC-Nr. 4 393 961	900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 001	700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 017	950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 020	700	249,0-257,0	725	600	258,0-264,0	100	130,0-170,0	300	19,0-29,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 062	800	113,0-119,0	820	600	102,0-108,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 064	875	161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 066	800	125,0-131,0	820	600	134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 068	1025	192,0-198,0	1045	900	180,0-186,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 070	1000	200,0-206,0	1020	800 600	180,0-186,0 189,0-195,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 072	940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 074	1025	230,0-236,0	1040	900 700	207,0-213,0 209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 076	1000	227,0-233,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 078	1000	235,0-241,0	1020	700	263,0-269,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 080	1000	220,0-226,0	1020	800 600	209,0-215,0 227,0-233,0	100	130,0-170,0	300	19,0,25,0
AC-Nr. 4 394 082	910	190,0	930	-	-	100	130,0-170,0	300	25,0
AC-Nr. 4 394 084	900	160,0-166,0	920	700	139,0-145,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 086	600	124,0-130,0	620	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 088	700	127,0-133,0	720	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 090	800	139,0-145,0	820	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ② intermediate speed ④	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 092	925	157,0-163,0	945	800 600	145,0-151,0 134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 094	1000	180,0-186,0	1020	800 700	154,0-160,0 142,0-148,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 096	1050	207,0-213,0	1070	900 800	161,0-175,0 147,0-153,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 098	900	187,0-193,0	920	700	162,0-168,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 100	900	200,0-206,0	920	700	184,0-190,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 102	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 104	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 106	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 108	1050	222,0-228,0	1070	900 700	202,0-208,0 207,0-213,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 110	1000	240,0-246,0	1020	800 600	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 112	1050	245,0-251,0	1070	900 700	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 114	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 116	900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 118	1050	269,0-275,0	1070	900 700	281,0-287,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 394 120								
1050	234,0-240,0	1070	900 700	246,0-252,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 122								
1050	262,0-268,0	1070	900 700	279,0-285,0 289,0-295,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 124								
1050	241,0-247,0	1070	900 700	265,0-271,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 126								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 128								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 130								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 132								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 134								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 136								
1000	255,0-261,0	1020	800 600	272,0-278,0 270,0-276,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 138								
1050	239,0-245,0	1070	900 700	233,0-239,0 273,0-279,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 140								
1000	215,0-221,0	1020	800 600	197,0-203,0 220,0-226,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 142								
900	222,0-228,0	920	700	254,0-260,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 144								
1050	257,0-263,0	1070	750	272,0-278,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 148								
1050	295,0-303,0	1075	900	309,0-315,0	100	130,0-170,0	300	25,0



### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery (2) Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery (6) idle switching point		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 150

1050 268,0-274,0 1070 900 274,0-280,0 100 130,0-170,0 300 19,0-25,0  
700 280,0-286,0

AC-Nr. 4 394 152

1050 262,0-268,0 1070 900 267,0-273,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-273,0

AC-Nr. 4 394 154

1050 279,0-285,0 1070 900 283,0-289,0 100 130,0-170,0 300 19,0-25,0  
700 293,0-299,0

AC-Nr. 4 394 156

1050 296,0-302,0 1070 900 301,0-307,0 100 130,0-170,0 300 19,0-25,0  
700 309,0-315,0

AC-Nr. 4 394 158

" 4 394 157

1050 253,0-256,0 1070 900 252,0-258,0 100 130,0-170,0 300 19,0-25,0  
700 269,0-275,0

AC-Nr. 4 394 160

1050 208,0-214,0 1070 900 230,0-235,0 100 130,0-170,0 300 19,0-25,0  
700 260,0-266,0

AC-Nr. 4 394 162

900 181,0-187,0 920 700 172,0-178,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 164

925 176,0-182,0 945 800 162,0-168,0 100 130,0-170,0 300 19,0-25,0  
700 177,0-183,0

AC-Nr. 4 394 166

900 173,0-179,0 920 800 160,0-166,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 168

925 237,0-243,0 945 800 251,0-257,0 100 130,0-170,0 300 27,0-33,0  
700 269,0-275,0

AC-Nr. 4 394 170

700 218,0-224,0 720 600 240,0-246,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 176

1050 213,0-219,0 1070 900 212,0-218,0 100 130,0-170,0 300 19,0-25,0  
700 240,0-246,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 246

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	300	19,0-25,0
			700	258,5-269,5				
			600	255,5-266,0				

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

700	246,0	720			100	130,0-170,0	300	19,0-25,0
600	263,0							

AC-Nr. 4 394 250

1050	244,5-254,5	1060-1080			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 257

600	258,0				100	130,0-170,0	300	27,0
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AC-Nr. 4 394 314

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 331

1050	241,0-247,0	1070			100	130,0-170,0	300	19,0-25,0
900	265,0-271,0							
700	268,0-274,0							

AC-Nr. 4 394 332

1050	268,0-274,0	1070			100	130,0-170,0	300	19,0-25,0
900	274,0-280,0							
700	280,0-286,0							

AC-Nr. 4 394 347

1050	269,0-275,0	1070			100	130,0-170,0	300	19,0-25,0
900	281,0-287,0							
700	293,0-299,0							

AC-Nr. 4 394 348

1050	234,0-240,0	1070			100	130,0-170,0	300	19,0-25,0
900	246,0-252,0							
700	268,0-274,0							

AC-Nr. 4 394 349

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 350

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	279,0-285,0							
700	289,0-295,0							

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 351

1050	253,0-256,0	1070	100	130,0-170,0	300	19,0-25,0
900	252,0-258,0					
700	269,0-275,0					

AC-Nr. 4 394 352

1050	262,0-268,0	1070	100	130,0-170,0	300	19,0-25,0
900	267,0-273,0					
700	267,0-273,0					

AC-Nr. 4 394 353

1050	279,0-285,0	1070	100	130,0-170,0	300	19,0-25,0
900	283,0-289,0					
700	293,0-299,0					

AC-Nr. 4 394 354

1050	296,0-302,0	1070	100	130,0-170,0	300	19,0-25,0
900	301,0-307,0					
700	309,0-315,0					

AC-Nr. 4 394 356

1050	246,0	1070	100	130,0-170,0	300	19,0-25,0
900	240,0					
700	267,0					

AC-Nr. 4 394 386

600	167,0-175,0	620	100	130,0-170,0	300	25,0
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AC-Nr. 4 394 390

900	259,0-267,0	925	100	130,0-170,0	300	19,0-29,0
700	238,0-246,0					

AC-Nr. 4 394 428

1000	188,0-196,0	1025	100	130,0-170,0	300	25,0
800	180,0-187,0					

AC-Nr. 4 394 473

850	189,0-197,0	875	100	130,0-170,0	325	30,0
750	185,0-193,0					

AC-Nr. 4 394 501

900	175,0	925	100	130,0-170,0	300	19,0-25,0
700	158,0					

AC-Nr. 4 394 521

1000	239,0-247,0	1025	100	130,0-170,0	300	25,0
700	229,0-235,0					

AC-Nr. 4 394 527

900	161,0	925	100	130,0-170,0	300	19,0-25,0
800	151,0					

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 541

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593

1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705

" 4 394 706

1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719

875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733

1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

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## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control rod stop Test oil temp. 40°C (104°F) <span style="float: right;">(2)</span>		Breakaway <span style="float: right;">(2b)</span> intermediate speed <span style="float: right;">(4a)</span>	Fuel delivery characteristics <span style="float: right;">(5a)</span> high idle speed <span style="float: right;">(5b)</span>		Starting fuel delivery idle switching point <span style="float: right;">(6)</span>		Low idle speed <span style="float: right;">(5)</span> Control rod travel mm	
rev./min.	cm <sup>3</sup> /1000 strokes	rev./min	rev./min	cm <sup>3</sup> /1000 strokes	rev./min	cm <sup>3</sup> /1000 strokes	rev./min	mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 740/741

1020	213,0-226,0	1030-1040						
915	208,0-218,0							

AC-Nr. 4 394 744

1050	250,0	1060-1080			100	130,0-170,0	300	19,0-25,0
900	256,0							

AC-Nr. 4 394 745

950	208,0-214,0	990			100	130,0-170,0	300	21,0-27,0
750	196,0-202,0							

AC-Nr. 4 394 746

875	161,0-165,0	890			100	130,0-170,0	300	19,0-25,0
600	140,0-144,0							

AC-Nr. 4 394 771

800	113,0-119,0	820			100	130,0-170,0	300	19,0-25,0
600	102,0-108,0							

AC-Nr. 4 394 773

800	125,0-131,0	820			100	130,0-170,0	300	19,0-25,0
600	134,0-140,0							

AC-Nr. 4 394 775

1025	192,0-198,0	1045			100	130,0-170,0	300	19,0-25,0
900	180,0-186,0							

AC-Nr. 4 394 777

1000	200,0-206,0	1020			100	130,0-170,0	300	19,0-25,0
800	180,0-186,0							
600	189,0-195,0							

AC-Nr. 4 394 779

940	185,0-195,0	955-65			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 781

1025	230,0-236,0	1040			100	130,0-170,0	300	19,0-25,0
900	207,0-213,0							
700	209,0-215,0							

AC-Nr. 4 394 783

1000	227,0-233,0	1020			100	130,0-170,0	300	19,0-25,0
800	197,0-203,0							

AC-Nr. 4 394 785

1000	235,0-241,0	1020			100	130,0-170,0	300	19,0-25,0
700	263,0-269,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 787								
1000	220,0-226,0	1020			100	130,0-170,0	300	19,0-25,0
800	209,0-215,0							
600	227,0-233,0							
AC-Nr. 4 394 789								
910	190,0	930			100	130,0-170,0	300	25,0
AC-Nr. 4 394 791								
900	160,0-166,0	920			100	130,0-170,0	300	19,0-25,0
700	139,0-145,0							
AC-Nr. 4 394 793								
600	124,0-130,0	620			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 795								
700	127,0-133,0	720			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							
AC-Nr. 4 394 797								
800	139,0-145,0	820			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							
AC-Nr. 4 394 799								
925	157,0-163,0	945			100	130,0-170,0	300	19,0-25,0
800	145,0-151,0							
600	134,0-140,0							
AC-Nr. 4 394 801								
1000	180,0-186,0	1020			100	130,0-170,0	300	19,0-25,0
800	154,0-160,0							
700	142,0-148,0							
AC-Nr. 4 394 803								
1050	207,0-213,0	1070			100	130,0-170,0	300	19,0-25,0
900	161,0-175,0							
800	147,0-153,0							
AC-Nr. 4 394 805								
900	187,0-193,0	920			100	130,0-170,0	300	27,0-33,0
700	162,0-168,0							
AC-Nr. 4 394 807								
900	200,0-206,0	920			100	130,0-170,0	300	27,0-33,0
700	184,0-190,0							
AC-Nr. 4 394 809								
900	203,0-209,0	920			100	130,0-170,0	300	19,0-25,0
700	209,0-215,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 811

750	185,0-191,0	770	100	130,0-170,0	300	19,0-25,0
600	222,0-228,0					

AC-Nr. 4 394 813

800	210,0-218,0	820	100	130,0-170,0	300	19,0-25,0
600	223,0-229,0					

AC-Nr. 4 394 815

1050	222,0-228,0	1070	100	130,0-170,0	300	19,0-25,0
900	202,0-208,0					
700	207,0-213,0					

AC-Nr. 4 394 817

1000	240,0-246,0	1020	100	130,0-170,0	300	19,0-25,0
800	224,0-230,0					
600	237,0-243,0					

AC-Nr. 4 394 819

1050	245,0-251,0	1070	100	130,0-170,0	300	19,0-25,0
900	224,0-230,0					
700	237,0-243,0					

AC-Nr. 4 394 821

1000	217,0-223,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					
600	219,0-225,0					

AC-Nr. 4 394 823

900	210,0-216,0	920	100	130,0-170,0	300	27,0-33,0
700	212,0-218,0					

AC-Nr. 4 394 825

1050	269,0-275,0	1070	100	130,0-170,0	300	19,0-25,0
900	281,0-287,0					
700	293,0-299,0					

AC-Nr. 4 394 827

1050	234,0-240,0	1070	100	130,0-170,0	300	19,0-25,0
900	246,0-252,0					
700	268,0-274,0					

AC-Nr. 4 394 829

1050	262,0-268,0	1070	100	130,0-170,0	300	19,0-25,0
900	279,0-285,0					
700	289,0-295,0					

AC-Nr. 4 394 831

1050	241,0-247,0	1070	100	130,0-170,0	300	19,0-25,0
900	265,0-271,0					
700	268,0-274,0					

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full load delivery Control rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a) rev/min	Fuel delivery characteristics (5a) high idle speed (5b) rev/min		Starting fuel delivery idle switching point (6) rev/min		Low idle speed (5) Control rod travel mm	
1 rev/min	2 cm <sup>3</sup> /1000 strokes	3	4 rev/min	5 cm <sup>3</sup> /1000 strokes	6 rev/min	7 cm <sup>3</sup> /1000 strokes	8 rev/min	9

AC-Nr. 4 394 833

900	232,0-238,0	920	100	130,0-170,0	300	19,0-25,0
700	253,0-259,0					

AC-Nr. 4 394 835

750	244,0-250,0	770	100	130,0-170,0	300	19,0-25,0
700	253,0-259,0					

AC-Nr. 4 394 837

800	239,0-245,0	820	100	130,0-170,0	300	19,0-25,0
600	248,0-254,0					

AC-Nr. 4 394 839

1000	212,0-218,0	1020	100	130,0-170,0	300	19,0-25,0
800	230,0-236,0					

AC-Nr. 4 394 841

900	288,0-294,0	920	100	130,0-170,0	300	27,0-33,0
700	287,0-293,0					

AC-Nr. 4 394 843

1000	255,0-261,0	1020	100	130,0-170,0	300	19,0-25,0
800	272,0-278,0					
600	270,0-276,0					

AC-Nr. 4 394 845

1050	239,0-245,0	1070	100	130,0-170,0	300	19,0-25,0
900	233,0-239,0					
700	273,0-279,0					

AC-Nr. 4 394 847

1000	215,0-221,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					
600	220,0-226,0					

AC-Nr. 4 394 849

900	222,0-228,0	920	100	130,0-170,0	300	19,0-25,0
700	254,0-260,0					

AC-Nr. 4 394 851

1050	257,0-263,0	1070	100	130,0-170,0	300	27,0-33,0
750	272,0-278,0					

AC-Nr. 4 394 853

1050	295,0-303,0	1075	100	130,0-170,0	300	25,0
900	309,0-315,0					

AC-Nr. 4 394 857

1050	262,0-268,0	1070	100	130,0-170,0	300	19,0-25,0
900	267,0-273,0					
700	267,0-273,0					

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min (4a)	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 861

1050 296,0-302,0 1070  
900 301,0-307,0  
700 309,0-315,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 863

1050 253,0-256,0 1070  
900 252,0-258,0  
700 269,0-275,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 865

1050 208,0-214,0 1070  
900 230,0-236,0  
700 260,0-266,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 867

900 181,0-187,0 920  
700 172,0-178,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 869

925 176,0-182,0 945  
800 162,0-168,0  
700 177,0-183,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 871

900 173,0-179,0 920  
800 160,0-166,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 873

925 237,0-243,0 945  
800 251,0-257,0  
700 269,0-275,0

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 875

700 218,0-224,0 720  
600 240,0-246,0

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 877

1050 213,0-219,0 1060-1080  
900 212,0-218,0  
700 240,0-246,0

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 879

1050 211,0-220,0 1055-1075 975 237,5-247,0 100 130,0-170,0 19,0-25,0  
700 258,5-269,5  
600 255,5-266,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed	Fuel delivery characteristics ⑤a high idle speed ⑤b		Starting fuel delivery idle switching point ⑥	Low idle speed ⑤		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 881

700 246,0 720 100 130,0-170,0 300 19,0-25,0  
600 263,0

AC-Nr. 4 394 883

1050 244,5-254,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 885

600 258,0 100 130,0-170,0 300 27,0

AC-Nr. 4 394 891

600 167,0-175,0 620 100 130,0-170,0 300 25,0

AC-Nr. 4 394 893

900 259,0-267,0 925 100 130,0-170,0 300 19,0-29,0  
700 238,0-246,0

AC-Nr. 4 394 895

1000 188,0-196,0 1025 100 130,0-170,0 300 25,0  
800 180,0-187,0

AC-Nr. 4 394 897

850 189,0-197,0 875 100 130,0-170,0 325 30,0  
750 185,0-193,0

AC-Nr. 4 394 899

900 175,0 925 100 130,0-170,0 300 19,0-25,0  
700 158,0

AC-Nr. 4 394 905

1000 239,0-247,0 1025 100 130,0-170,0 300 25,0  
700 229,0-235,0

AC-Nr. 4 394 907

900 161,0 925 100 130,0-170,0 300 19,0-25,0  
800 151,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 911

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 915

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 ALO 16,0 d

En

PE 6 P 120 A 420 LS 245 RQV 300...1050 PA 154 KR  
0 401 846 269  
1 - 5 - 3 - 6 - 2 - 4

supersedes  
company Allis-Chalmers  
engine 16000-25000

Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> /100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	12	26,4 - 27,1			1,0	
600	6	8,6 - 9,8				
	12	26,3 - 28,1				
	15	33,8 - 36,1				
200	6	4,2 - 5,2				

Adjust the fuel delivery from each outlet according to the values in

Testoil-ISO 4113

## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel ①	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	①a	Degree of deflection of control lever 4	rev/min Control rod travel mm ④	Degree of deflection of control lever 7	rev/min Control rod travel mm ③	③a	rev/min 10	mm 11
66°	1050 1100 1150 1210 1300	15,0-18,0 10,7-15,0 6,0-11,6 0- 7,0 0				10°	250 350 450 550		6,4-8,0 3,0-5,2 1,3-2,8 0	

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ②b	Fuel delivery characteristics high idle speed ⑤a		Starting fuel delivery idle switching point ⑥		Torque-control travel ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

Checking values in brackets

\* 1 mm less control rod travel than col. 2

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 320 754	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 793	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 815	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 816	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 817	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 829	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 933	900	102,0-110,0	1040	800	107,0-116,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 939	900	98,5 ± 3	1040	700	107,5 ± 4	100	90,0-130,0	300	25,0
AC-Nr. 4 320 940	900	78,0- 86,0	1040	700	100,0-109,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 941	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 942	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 980	900	108,0-116,0	1120	800	-	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 981	900	111,0-119,0	1020	800	112,0-118,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 016	750	95,0-101,0	1020	750	95,0-101,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 064	1000	112,0	1030	800	112,5	100	90,0-130,0	300	25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery (2) Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery (6) idle switching point		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 359 816	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 826	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 828	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 359 830	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 832	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 392 693	1050	205,0-215,0	1065-80	900	167,0-177,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 695	900	149,0-155,0	920	-	-	-	-	300	19,0-25,0
AC-Nr. 4 392 697	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 699	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 701	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 703	1050	220,0-230,0	1060-70	900 700	200,0-210,0 205,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 707	1050	243,0-253,0	1060-80	900 700	222,0-232,0 235,0-245,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 709	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 711	600	231,0-237,0	620	-	-	-	-	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway intermediate speed ②b	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min ④a	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 392 715

1050 187,0-193,0 1070 900 174,0-180,0 100 130,0-170,0 300 19,0-25,0  
700 175,0-181,0

AC-Nr. 4 392 717

1050 224,0-230,0 1070 800 185,0-191,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 719

1050 200,0-206,0 1070 900 190,0-196,0 100 130,0-170,0 300 19,0-25,0  
700 214,0-220,0

AC-Nr. 4 392 721

1050 242,0-248,0 1070 900 220,0-226,0 100 130,0-170,0 300 19,0-25,0  
700 230,0-236,0

AC-Nr. 4 392 723

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 725

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 727

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 729

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 392 731

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 392 735

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 392 737

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 392 739

1050 207,0-213,0 1050 900 195,0-201,0 100 130,0-170,0 300 19,0-25,0  
700 225,0-231,0

AC-Nr. 4 392 741

1050 213,0-219,0 1070 900 202,0-208,0 100 130,0-170,0 - -  
700 230,0-236,0

AC-Nr. 4 392 743

1050 220,0-226,0 1070 900 210,0-216,0 100 130,0-170,0 300 19,0-25,0  
700 243,0-249,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

-5-

AC-Nr. 4 392 747								
1050	227,0-233,0	1070	900	208,0-214,0	100	130,0-170,0	300	19,0-25,0
			700	247,0-253,0				
AC-Nr. 4 392 749								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 750								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 768								
800	123,0-133,0	820	600	132,0-142,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 775/776								
875	162,0-164,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 777								
950	205,0-207,0	970	700	195,0-199,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 778								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 3 392 779								
1025	190,0-200,0	1030-40	1000	191,0-201,0	100	130,0-170,0	300	19,0-25,0
			900	178,0-188,0				
AC-Nr. 4 392 781								
1025	228,0-238,0	1050-60	900	205,0-215,0	100	130,0-170,0	300	19,0-25,0
			700	207,0-217,0				
AC-Nr. 4 392 953								
940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 095								
1050	211,0-221,0	1060-80	900	210,0-220,0	100	130,0-170,0	300	19,0-25,0
			700	238,0-248,0				
AC-Nr. 4 393 307								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 393 431								
1050	208,0-214,0	1070	900	230,0-235,0	100	130,0-170,0	300	19,0-25,0
			700	260,0-266,0				
AC-Nr. 4 393 821								
1050	242,0-248,0	1070	900	220,0-226,0	100	130,0-170,0	300	19,0-25,0
			700	230,0-236,0				

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop ② Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 393 823								
1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 825								
1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 827								
1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 829								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 831								
1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 393 833								
1050	264,0	1060-1080	900	280,5	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 835								
1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0,25,0
AC-Nr. 4 393 837								
1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 890								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 393 891								
955	208,0	965-975	895	203,0	-	-	-	-
AC-Nr. 4 393 961								
900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 001								
700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 017								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 020								
700	249,0-257,0	725	600	258,0-264,0	100	130,0-170,0	300	19,0-29,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④b	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 062	800	113,0-119,0	820	600	102,0-108,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 064	875	161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 066	800	125,0-131,0	820	600	134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 068	1025	192,0-198,0	1045	900	180,0-186,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 070	1000	200,0-206,0	1020	800 600	180,0-186,0 189,0-195,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 072	940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 074	1025	230,0-236,0	1040	900 700	207,0-213,0 209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 076	1000	227,0-233,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 078	1000	235,0-241,0	1020	700	263,0-269,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 080	1000	220,0-226,0	1020	800 600	209,0-215,0 227,0-233,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 082	910	190,0	930	-	-	100	130,0-170,0	300	25,0
AC-Nr. 4 394 084	900	160,0-166,0	920	700	139,0-145,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 086	600	124,0-130,0	620	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 088	700	127,0-133,0	720	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 090	800	139,0-145,0	820	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 092								
925	157,0-163,0	945	800	145,0-151,0	100	130,0-170,0	300	19,0-25,0
			600	134,0-140,0				
AC-Nr. 4 394 094								
1000	180,0-186,0	1020	800	154,0-160,0	100	130,0-170,0	300	19,0-25,0
			700	142,0-148,0				
AC-Nr. 4 394 096								
1050	207,0-213,0	1070	900	161,0-175,0	100	130,0-170,0	300	19,0-25,0
			800	147,0-153,0				
AC-Nr. 4 394 098								
900	187,0-193,0	920	700	162,0-168,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 100								
900	200,0-206,0	920	700	184,0-190,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 102								
900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 104								
750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 106								
800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 108								
1050	222,0-228,0	1070	900	202,0-208,0	100	130,0-170,0	300	19,0-25,0
			700	207,0-213,0				
AC-Nr. 4 394 110								
1000	240,0-246,0	1020	800	224,0-230,0	100	130,0-170,0	300	19,0-25,0
			600	237,0-243,0				
AC-Nr. 4 394 112								
1050	245,0-251,0	1070	900	224,0-230,0	100	130,0-170,0	300	19,0-25,0
			700	237,0-243,0				
AC-Nr. 4 394 114								
1000	217,0-223,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
			600	219,0-225,0				
AC-Nr. 4 394 116								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 118								
1050	269,0-275,0	1070	900	281,0-287,0	100	130,0-170,0	300	19,0-25,0
			700	293,0-299,0				

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery (2) Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery (6) idle switching point		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 120								
1050	234,0-240,0	1070	900 700	246,0-252,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 122								
1050	262,0-268,0	1070	900 700	279,0-285,0 289,0-295,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 124								
1050	241,0-247,0	1070	900 700	265,0-271,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 126								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 128								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 130								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 132								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 134								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 136								
1000	255,0-261,0	1020	800 600	272,0-278,0 270,0-276,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 138								
1050	239,0-245,0	1070	900 700	233,0-239,0 273,0-279,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 140								
1000	215,0-221,0	1020	800 600	197,0-203,0 220,0-226,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 142								
900	222,0-228,0	920	700	254,0-260,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 144								
1050	257,0-263,0	1070	750	272,0-278,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 148								
1050	295,0-303,0	1075	900	309,0-315,0	100	130,0-170,0	300	25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	e	o

AC-Nr. 4 394 150	1050	268,0-274,0	1070	900 700	274,0-280,0 280,0-286,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 152	1050	262,0-268,0	1070	900 700	267,0-273,0 267,0-273,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 154	1050	279,0-285,0	1070	900 700	283,0-289,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 156	1050	296,0-302,0	1070	900 700	301,0-307,0 309,0-315,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 158 " 4 394 157	1050	253,0-256,0	1070	900 700	252,0-258,0 269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 160	1050	208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 162	900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 164	925	176,0-182,0	945	800 700	162,0-168,0 177,0-183,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 166	900	173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 168	925	237,0-243,0	945	800 700	251,0-257,0 269,0-275,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 170	700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 176	1050	213,0-219,0	1070	900 700	212,0-218,0 240,0-246,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 246

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	300	19,0-25,0
			700	258,5-269,5				
			600	255,5-266,0				

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

700	246,0	720			100	130,0-170,0	300	19,0-25,0
600	263,0							

AC-Nr. 4 394 250

1050	244,5-254,5	1060-1080			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 257

600	258,0				100	130,0-170,0	300	27,0
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AC-Nr. 4 394 314

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 331

1050	241,0-247,0	1070			100	130,0-170,0	300	19,0-25,0
900	265,0-271,0							
700	268,0-274,0							

AC-Nr. 4 394 332

1050	268,0-274,0	1070			100	130,0-170,0	300	19,0-25,0
900	274,0-280,0							
700	280,0-286,0							

AC-Nr. 4 394 347

1050	269,0-275,0	1070			100	130,0-170,0	300	19,0-25,0
900	281,0-287,0							
700	293,0-299,0							

AC-Nr. 4 394 348

1050	234,0-240,0	1070			100	130,0-170,0	300	19,0-25,0
900	246,0-252,0							
700	268,0-274,0							

AC-Nr. 4 394 349

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 350

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	279,0-285,0							
700	289,0-295,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 351

1050	253,0-256,0	1070			100	130,0-170,0	300	19,0-25,0
900	252,0-258,0							
700	269,0-275,0							

AC-Nr. 4 394 352

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	267,0-273,0							
700	267,0-273,0							

AC-Nr. 4 394 353

1050	279,0-285,0	1070			100	130,0-170,0	300	19,0-25,0
900	283,0-289,0							
700	293,0-299,0							

AC-Nr. 4 394 354

1050	296,0-302,0	1070			100	130,0-170,0	300	19,0-25,0
900	301,0-307,0							
700	309,0-315,0							

AC-Nr. 4 394 356

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 386

600	167,0-175,0	620			100	130,0-170,0	300	25,0
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AC-Nr. 4 394 390

900	259,0-267,0	925			100	130,0-170,0	300	19,0-29,0
700	238,0-246,0							

AC-Nr. 4 394 428

1000	188,0-196,0	1025			100	130,0-170,0	300	25,0
800	180,0-187,0							

AC-Nr. 4 394 473

850	189,0-197,0	875			100	130,0-170,0	325	30,0
750	185,0-193,0							

AC-Nr. 4 394 501

900	175,0	925			100	130,0-170,0	300	19,0-25,0
700	158,0							

AC-Nr. 4 394 521

1000	239,0-247,0	1025			100	130,0-170,0	300	25,0
700	229,0-235,0							

AC-Nr. 4 394 527

900	161,0	925			100	130,0-170,0	300	19,0-25,0
800	151,0							

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 541

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 550

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 561

1050 258,0 1060-1080 100 130,0-170,0 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 564

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 569

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 590

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 593

1050 251,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 703

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 705

" 4 394 706

1050 258,0 1060-1080 100 130,0-170 300 19,0-25,0  
900 256,0

AC-Nr. 4 394 707

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 718

955 198,0-213,0 965-975 100 130,0-170,0 300 21,0-27,0  
800 196,0-210,0

AC-Nr. 4 394 719

875 166,0-168,0 915 100 130,0-170,0 300 21,0-27,0  
600 142,5-146,5

AC-Nr. 4 394 733

1000 255,0-261,0 1020 100 130,0-170,0 300 19,0-25,0  
800 272,0-278,0  
600 270,0-276,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway intermediate speed (2b)	Fuel delivery characteristics (5a)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min (4a)	rev/min	cm <sup>3</sup> /1000 strokes (5b)	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 740/741

1020	213,0-226,0	1030-1040
915	208,0-218,0	

AC-Nr. 4 394 744

1050	250,0	1060-1080	100	130,0-170,0	300	19,0-25,0
900	256,0					

AC-Nr. 4 394 745

950	208,0-214,0	990	100	130,0-170,0	300	21,0-27,0
750	196,0-202,0					

AC-Nr. 4 394 746

875	161,0-165,0	890	100	130,0-170,0	300	19,0-25,0
600	140,0-144,0					

AC-Nr. 4 394 771

800	113,0-119,0	820	100	130,0-170,0	300	19,0-25,0
600	102,0-108,0					

AC-Nr. 4 394 773

800	125,0-131,0	820	100	130,0-170,0	300	19,0-25,0
600	134,0-140,0					

AC-Nr. 4 394 775

1025	192,0-198,0	1045	100	130,0-170,0	300	19,0-25,0
900	180,0-186,0					

AC-Nr. 4 394 777

1000	200,0-206,0	1020	100	130,0-170,0	300	19,0-25,0
800	180,0-186,0					
600	189,0-195,0					

AC-Nr. 4 394 779

940	185,0-195,0	955-65	100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 781

1025	230,0-236,0	1040	100	130,0-170,0	300	19,0-25,0
900	207,0-213,0					
700	209,0-215,0					

AC-Nr. 4 394 783

1000	227,0-233,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					

AC-Nr. 4 394 785

1000	235,0-241,0	1020	100	130,0-170,0	300	19,0-25,0
700	263,0-269,0					

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (3b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 787		1020			100	130,0-170,0	300	19,0-25,0
1000	220,0-226,0							
800	209,0-215,0							
600	227,0-233,0							
AC-Nr. 4 394 789		930			100	130,0-170,0	300	25,0
910	190,0							
AC-Nr. 4 394 791		920			100	130,0-170,0	300	19,0-25,0
900	160,0-166,0							
700	139,0-145,0							
AC-Nr. 4 394 793		620			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							
AC-Nr. 4 394 795		720			100	130,0-170,0	300	19,0-25,0
700	127,0-133,0							
600	124,0-130,0							
AC-Nr. 4 394 797		820			100	130,0-170,0	300	19,0-25,0
800	139,0-145,0							
600	124,0-130,0							
AC-Nr. 4 394 799		945			100	130,0-170,0	300	19,0-25,0
925	157,0-163,0							
800	145,0-151,0							
600	134,0-140,0							
AC-Nr. 4 394 801		1020			100	130,0-170,0	300	19,0-25,0
1000	180,0-186,0							
800	154,0-160,0							
700	142,0-148,0							
AC-Nr. 4 394 803		1070			100	130,0-170,0	300	19,0-25,0
1050	207,0-213,0							
900	161,0-175,0							
800	147,0-153,0							
AC-Nr. 4 394 805		920			100	130,0-170,0	300	27,0-33,0
900	187,0-193,0							
700	162,0-168,0							
AC-Nr. 4 394 807		920			100	130,0-170,0	300	27,0-33,0
900	200,0-206,0							
700	184,0-190,0							
AC-Nr. 4 394 809		920			100	130,0-170,0	300	19,0-25,0
900	203,0-209,0							
700	209,0-215,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 811

750 185,0-191,0  
600 222,0-228,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 813

800 210,0-218,0  
600 223,0-229,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 815

1050 222,0-228,0  
900 202,0-208,0  
700 207,0-213,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 817

1000 240,0-246,0  
800 224,0-230,0  
600 237,0-243,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 819

1050 245,0-251,0  
900 224,0-230,0  
700 237,0-243,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 821

1000 217,0-223,0  
800 197,0-203,0  
600 219,0-225,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 823

900 210,0-216,0  
700 212,0-218,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 825

1050 269,0-275,0  
900 281,0-287,0  
700 293,0-299,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 827

1050 234,0-240,0  
900 246,0-252,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 829

1050 262,0-268,0  
900 279,0-285,0  
700 289,0-295,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 831

1050 241,0-247,0  
900 265,0-271,0  
700 268,0-274,0

1070

100 130,0-170,0 300 19,0-25,0

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 833

900	232,0-238,0	920	100	130,0-170,0	300	19,0-25,0
700	253,0-259,0					

AC-Nr. 4 394 835

750	244,0-250,0	770	100	130,0-170,0	300	19,0-25,0
700	253,0-259,0					

AC-Nr. 4 394 837

800	239,0-245,0	820	100	130,0-170,0	300	19,0-25,0
600	248,0-254,0					

AC-Nr. 4 394 839

1000	212,0-218,0	1020	100	130,0-170,0	300	19,0-25,0
800	230,0-236,0					

AC-Nr. 4 394 841

900	288,0-294,0	920	100	130,0-170,0	300	27,0-33,0
700	287,0-293,0					

AC-Nr. 4 394 843

1000	255,0-261,0	1020	100	130,0-170,0	300	19,0-25,0
800	272,0-278,0					
600	270,0-276,0					

AC-Nr. 4 394 845

1050	239,0-245,0	1070	100	130,0-170,0	300	19,0-25,0
900	233,0-239,0					
700	273,0-279,0					

AC-Nr. 4 394 847

1000	215,0-221,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					
600	220,0-226,0					

AC-Nr. 4 394 849

900	222,0-228,0	920	100	130,0-170,0	300	19,0-25,0
700	254,0-260,0					

AC-Nr. 4 394 851

1050	257,0-263,0	1070	100	130,0-170,0	300	27,0-33,0
750	272,0-278,0					

AC-Nr. 4 394 853

1050	295,0-303,0	1075	100	130,0-170,0	300	25,0
900	309,0-315,0					

AC-Nr. 4 394 857

1050	262,0-268,0	1070	100	130,0-170,0	300	19,0-25,0
900	267,0-273,0					
700	267,0-273,0					

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)	Low idle speed (5)		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 861								
1050	296,0-302,0	1070			100	130,0-170,0	300	19,0-25,0
900	301,0-307,0							
700	309,0-315,0							
AC-Nr. 4 394 863								
1050	253,0-256,0	1070			100	130,0-170,0	300	19,0-25,0
900	252,0-258,0							
700	269,0-275,0							
AC-Nr. 4 394 865								
1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							
AC-Nr. 4 394 867								
900	181,0-187,0	920			100	130,0-170,0	300	19,0-25,0
700	172,0-178,0							
AC-Nr. 4 394 869								
925	176,0-182,0	945			100	130,0-170,0	300	19,0-25,0
800	162,0-168,0							
700	177,0-183,0							
AC-Nr. 4 394 871								
900	173,0-179,0	920			100	130,0-170,0	300	19,0-25,0
800	160,0-166,0							
AC-Nr. 4 394 873								
925	237,0-243,0	945			100	130,0-170,0	300	27,0-33,0
800	251,0-257,0							
700	269,0-275,0							
AC-Nr. 4 394 875								
700	218,0-224,0	720			100	130,0-170,0	300	27,0-33,0
600	240,0-246,0							
AC-Nr. 4 394 877								
1050	213,0-219,0	1060-1080			100	130,0-170,0	300	19,0-25,0
900	212,0-218,0							
700	240,0-246,0							
AC-Nr. 4 394 879								
1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	19,0-25,0	
			700	258,5-269,5				
			600	255,5-266,0				

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

K2

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed	Fuel delivery characteristics ⑤a high idle speed ⑤b		Starting fuel delivery idle switching point ⑥	Low idle speed ⑤		
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

-19-

AC-Nr. 4 394 881	700 600	246,0 263,0	720		100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 883	1050	244,5-254,5	1060-1080		100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 885	600	258,0			100	130,0-170,0	300	27,0
AC-Nr. 4 394 891	600	167,0-175,0	620		100	130,0-170,0	300	25,0
AC-Nr. 4 394 893	900 700	259,0-267,0 238,0-246,0	925		100	130,0-170,0	300	19,0-29,0
AC-Nr. 4 394 895	1000 800	188,0-196,0 180,0-187,0	1025		100	130,0-170,0	300	25,0
AC-Nr. 4 394 897	850 750	189,0-197,0 185,0-193,0	875		100	130,0-170,0	325	30,0
AC-Nr. 4 394 899	900 700	175,0 158,0	925		100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 905	1000 700	239,0-247,0 229,0-235,0	1025		100	130,0-170,0	300	25,0
AC-Nr. 4 394 907	900 800	161,0 151,0	925		100	130,0-170,0	300	19,0-25,0
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".								
AC-Nr. 4 394 909	1050	202,0-210,5	1060-1080		100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 911	1000	230,5-239,5	1010-1030		100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 915	1000	203,0-211,5	1010-1030		100	130,0-170,0	300	19,0-25,0

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 ALO 16,0 e

En

PE 6 P 120 A 420 LS 245 RQV 300...1050 PA 202 KR

supersedes

0 401 846 270

company Allis-Chalmers

1 - 5 - 3 - 6 - 2 - 4

engine: 16000-25000

Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 5	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	12	26,4 - 27,1			1,0	
600	6	8,6 - 9,8				
	12	26,3 - 28,1				
	15	33,8 - 36,2				
200	6	4,2 - 5,2				

Adjust the fuel delivery from each outlet according to the values in

Testoil-ISO 4113

## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min 3	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm 6	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm 9	rev/min 10	mm 11
66°	1050 1100 1150 1210 1300	15,0-18,0 10,7-15,0 6,0-11,6 0,7 0				10°	250 350 450 550	6,4-8,0 3,0-5,2 1,3-2,8 0		

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F)		Rotational-speed limitation intermediate speed	Fuel delivery characteristics high idle speed		Starting fuel delivery idle switching point		Torque-control travel	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

Checking values in brackets

\* 1 mm less control rod travel than col. 2



### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery (2) Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery (6) idle switching point		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 320 754	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 793	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 815	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 816	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 817	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 829	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 933	900	102,0-110,0	1040	800	107,0-116,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 939	900	98,5 ± 3	1040	700	107,5 ± 4	100	90,0-130,0	300	25,0
AC-Nr. 4 320 940	900	78,0- 86,0	1040	700	100,0-109,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 941	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 942	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 980	900	108,0-116,0	1120	800	-	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 981	900	111,0-119,0	1020	800	112,0-118,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 016	750	95,0-101,0	1020	750	95,0-101,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 064	1000	112,0	1030	800	112,5	100	90,0-130,0	300	25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed rev/min (4a)	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 359 816	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 826	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 828	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 359 830	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 832	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 392 693	1050	205,0-215,0	1065-80	900	167,0-177,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 695	900	149,0-155,0	920	-	-	-	-	300	19,0-25,0
AC-Nr. 4 392 697	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 699	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 701	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 703	1050	220,0-230,0	1060-70	900 700	200,0-210,0 205,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 707	1050	243,0-253,0	1060-80	900 700	222,0-232,0 235,0-245,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 709	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 711	600	231,0-237,0	620	-	-	-	-	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2a) intermediate speed (4a)	Full-load delivery (2) Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery (6) idle switching point		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 392 715								
1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 717								
1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 719								
1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 721								
1050	242,0-248,0	1070	900 700	220,0-226,0 230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 723								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 725								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 727								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 729								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 731								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 392 735								
1050	239,0-245,0	1070	900 700	233,0-239,0 273,0-279,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 737								
1000	215,0-221,0	1020	800 600	197,0-203,0 220,0-226,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 739								
1050	207,0-213,0	1050	900 700	195,0-201,0 225,0-231,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 741								
1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 392 743								
1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 392 747								
1050	227,0-233,0	1070	900	208,0-214,0	100	130,0-170,0	300	19,0-25,0
			700	247,0-253,0				
AC-Nr. 4 392 749								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 750								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 768								
800	123,0-133,0	820	600	132,0-142,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 775/776								
875	162,0-164,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 777								
950	205,0-207,0	970	700	195,0-199,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 778								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 3 392 779								
1025	190,0-200,0	1030-40	1000	191,0-201,0	100	130,0-170,0	300	19,0-25,0
			900	178,0-188,0				
AC-Nr. 4 392 781								
1025	228,0-238,0	1050-60	900	205,0-215,0	100	130,0-170,0	300	19,0-25,0
			700	207,0-217,0				
AC-Nr. 4 392 953								
940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 095								
1050	211,0-221,0	1060-80	900	210,0-220,0	100	130,0-170,0	300	19,0-25,0
			700	238,0-248,0				
AC-Nr. 4 393 307								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 393 431								
1050	208,0-214,0	1070	900	230,0-235,0	100	130,0-170,0	300	19,0-25,0
			700	260,0-266,0				
AC-Nr. 4 393 821								
1050	242,0-248,0	1070	900	220,0-226,0	100	130,0-170,0	300	19,0-25,0
			700	230,0-236,0				

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery Idle switching point ⑥		Low idle speed ⑤	
rev/min 1	cm³/1000 strokes 2	rev/min 3	rev/min 1	cm³/1000 strokes 2	rev/min 6	cm³/1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 393 823	1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 825	1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 827	1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 829	1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 831	1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 393 833	1050	264,0	1060-1080	900	280,5	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 835	1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0,25,0
AC-Nr. 4 393 837	1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 890	950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 393 891	955	208,0	965-975	895	203,0	-	-	-	-
AC-Nr. 4 393 961	900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 001	700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 017	950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 020	700	249,0-257,0	725	600	258,0-264,0	100	130,0-170,0	300	19,0-29,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

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AC-Nr. 4 394 062	800	113,0-119,0	820	600	102,0-108,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 064	875	161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 066	800	125,0-131,0	820	600	134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 068	1025	192,0-198,0	1045	900	180,0-186,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 070	1000	200,0-206,0	1020	800 600	180,0-186,0 189,0-195,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 072	940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 074	1025	230,0-236,0	1040	900 700	207,0-213,0 209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 076	1000	227,0-233,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 078	1000	235,0-241,0	1020	700	263,0-269,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 080	1000	220,0-226,0	1020	800 600	209,0-215,0 227,0-233,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 082	910	190,0	930	-	-	100	130,0-170,0	300	25,0
AC-Nr. 4 394 084	900	160,0-166,0	920	700	139,0-145,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 086	600	124,0-130,0	620	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 088	700	127,0-133,0	720	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 090	800	139,0-145,0	820	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 394 092	925	157,0-163,0	945	800 600	145,0-151,0 134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 094	1000	180,0-186,0	1020	800 700	154,0-160,0 142,0-148,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 096	1050	207,0-213,0	1070	900 800	161,0-175,0 147,0-153,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 098	900	187,0-193,0	920	700	162,0-168,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 100	900	200,0-206,0	920	700	184,0-190,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 102	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 104	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 106	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 108	1050	222,0-228,0	1070	900 700	202,0-208,0 207,0-213,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 110	1000	240,0-246,0	1020	800 600	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 112	1050	245,0-251,0	1070	900 700	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 114	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 116	900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 118	1050	269,0-275,0	1070	900 700	281,0-287,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 120								
1050	234,0-240,0	1070	900 700	246,0-252,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 122								
1050	262,0-268,0	1070	900 700	279,0-285,0 289,0-295,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 124								
1050	241,0-247,0	1070	900 700	265,0-271,0 268,0-274,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 126								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 128								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 130								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 132								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 134								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 136								
1000	255,0-261,0	1020	800 600	272,0-278,0 270,0-276,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 138								
1050	239,0-245,0	1070	900 700	233,0-239,0 273,0-279,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 140								
1000	215,0-221,0	1020	800 600	197,0-203,0 220,0-226,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 142								
900	222,0-228,0	920	700	254,0-260,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 144								
1050	257,0-263,0	1070	750	272,0-278,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 148								
1050	295,0-303,0	1075	900	309,0-315,0	100	130,0-170,0	300	25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 150								
1050	268,0-274,0	1070	900 700	274,0-280,0 280,0-286,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 152								
1050	262,0-268,0	1070	900 700	267,0-273,0 267,0-273,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 154								
1050	279,0-285,0	1070	900 700	283,0-289,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 156								
1050	296,0-302,0	1070	900 700	301,0-307,0 309,0-315,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 158								
"	4 394 157							
1050	253,0-256,0	1070	900 700	252,0-258,0 269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 160								
1050	208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 162								
900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 164								
925	176,0-182,0	945	800 700	162,0-168,0 177,0-183,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 166								
900	173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 168								
925	237,0-243,0	945	800 700	251,0-257,0 269,0-275,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 170								
700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 176								
1050	213,0-219,0	1070	900 700	212,0-218,0 240,0-246,0	100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 246

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	300	19,0-25,0
			700	258,5-269,5				
			600	255,5-266,0				

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

700	246,0	720			100	130,0-170,0	300	19,0-25,0
600	263,0							

AC-Nr. 4 394 250

1050	244,5-254,5	1060-1080			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 257

600	258,0				100	130,0-170,0	300	27,0
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AC-Nr. 4 394 314

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 331

1050	241,0-247,0	1070			100	130,0-170,0	300	19,0-25,0
900	265,0-271,0							
700	268,0-274,0							

AC-Nr. 4 394 332

1050	268,0-274,0	1070			100	130,0-170,0	300	19,0-25,0
900	274,0-280,0							
700	280,0-286,0							

AC-Nr. 4 394 347

1050	269,0-275,0	1070			100	130,0-170,0	300	19,0-25,0
900	281,0-287,0							
700	293,0-299,0							

AC-Nr. 4 394 348

1050	234,0-240,0	1070			100	130,0-170,0	300	19,0-25,0
900	246,0-252,0							
700	268,0-274,0							

AC-Nr. 4 394 349

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 350

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	279,0-285,0							
700	289,0-295,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 351

1050	253,0-256,0	1070			100	130,0-170,0	300	19,0-25,0
900	252,0-258,0							
700	269,0-275,0							

AC-Nr. 4 394 352

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	267,0-273,0							
700	267,0-273,0							

AC-Nr. 4 394 353

1050	279,0-285,0	1070			100	130,0-170,0	300	19,0-25,0
900	283,0-289,0							
700	293,0-299,0							

AC-Nr. 4 394 354

1050	296,0-302,0	1070			100	130,0-170,0	300	19,0-25,0
900	301,0-307,0							
700	309,0-315,0							

AC-Nr. 4 394 356

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 386

600	167,0-175,0	620			100	130,0-170,0	300	25,0
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AC-Nr. 4 394 390

900	259,0-267,0	925			100	130,0-170,0	300	19,0-29,0
700	238,0-246,0							

AC-Nr. 4 394 428

1000	188,0-196,0	1025			100	130,0-170,0	300	25,0
800	180,0-187,0							

AC-Nr. 4 394 473

850	189,0-197,0	875			100	130,0-170,0	325	30,0
750	185,0-193,0							

AC-Nr. 4 394 501

900	175,0	925			100	130,0-170,0	300	19,0-25,0
700	158,0							

AC-Nr. 4 394 521

1000	239,0-247,0	1025			100	130,0-170,0	300	25,0
700	229,0-235,0							

AC-Nr. 4 394 527

900	161,0	925			100	130,0-170,0	300	19,0-25,0
800	151,0							

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 541	1050	202,0-210,5	1060-1080		100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 550	1000	230,5-239,5	1010-1030		100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 561	1050	258,0	1060-1080		100	130,0-170,0	300	19,0-25,0
	900	256,0						
AC-Nr. 4 394 564	1050	244,0	1070		100	130,0-170,0	300	19,0-25,0
	900	234,0						
AC-Nr. 4 394 569	1000	203,0-211,5	1010-1030		100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 590	1050	260,5-271,0	1060-1080		100	130,0-170,0	300	19,0-25,0
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".								
AC-Nr. 4 394 593	1050	251,5-261,5	1060-1080		100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 703	1050	260,5-271,0	1060-1080	900	267,0-278,0	100	130,0-170,0	300
				700	267,0-278,0			
Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".								
AC-Nr. 4 394 705	1050	258,0	1060-1080		100	130,0-170	300	19,0-25,0
" 4 394 706	900	256,0						
AC-Nr. 4 394 707	1050	244,0	1070		100	130,0-170,0	300	19,0-25,0
	900	234,0						
AC-Nr. 4 394 718	955	198,0-213,0	965-975		100	130,0-170,0	300	21,0-27,0
	800	196,0-210,0						
AC-Nr. 4 394 719	875	166,0-168,0	915		100	130,0-170,0	300	21,0-27,0
	600	142,5-146,5						
AC-Nr. 4 394 733	1000	255,0-261,0	1020		100	130,0-170,0	300	19,0-25,0
	800	272,0-278,0						
	600	270,0-276,0						

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 740/741

1020	213,0-226,0	1030-1040
915	208,0-218,0	

AC-Nr. 4 394 744

1050	250,0	1060-1080	100	130,0-170,0	300	19,0-25,0
900	256,0					

AC-Nr. 4 394 745

950	208,0-214,0	990	100	130,0-170,0	300	21,0-27,0
750	196,0-202,0					

AC-Nr. 4 394 746

875	161,0-165,0	890	100	130,0-170,0	300	19,0-25,0
600	140,0-144,0					

AC-Nr. 4 394 771

800	113,0-119,0	820	100	130,0-170,0	300	19,0-25,0
600	102,0-108,0					

AC-Nr. 4 394 773

800	125,0-131,0	820	100	130,0-170,0	300	19,0-25,0
600	134,0-140,0					

AC-Nr. 4 394 775

1025	192,0-198,0	1045	100	130,0-170,0	300	19,0-25,0
900	180,0-186,0					

AC-Nr. 4 394 777

1000	200,0-206,0	1020	100	130,0-170,0	300	19,0-25,0
800	180,0-186,0					
600	189,0-195,0					

AC-Nr. 4 394 779

940	185,0-195,0	955-65	100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 781

1025	230,0-236,0	1040	100	130,0-170,0	300	19,0-25,0
900	207,0-213,0					
700	209,0-215,0					

AC-Nr. 4 394 783

1000	227,0-233,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					

AC-Nr. 4 394 785

1000	235,0-241,0	1020	100	130,0-170,0	300	19,0-25,0
700	263,0-269,0					

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) minimum speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 787

1000	220,0-226,0	1020			100	130,0-170,0	300	19,0-25,0
800	209,0-215,0							
600	227,0-233,0							

AC-Nr. 4 394 789

910	190,0	930			100	130,0-170,0	300	25,0
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AC-Nr. 4 394 791

900	160,0-166,0	920			100	130,0-170,0	300	19,0-25,0
700	139,0-145,0							

AC-Nr. 4 394 793

600	124,0-130,0	620			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 795

700	127,0-133,0	720			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							

AC-Nr. 4 394 797

800	139,0-145,0	820			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							

AC-Nr. 4 394 799

925	157,0-163,0	945			100	130,0-170,0	300	19,0-25,0
800	145,0-151,0							
600	134,0-140,0							

AC-Nr. 4 394 801

1000	180,0-186,0	1020			100	130,0-170,0	300	19,0-25,0
800	154,0-160,0							
700	142,0-148,0							

AC-Nr. 4 394 803

1050	207,0-213,0	1070			100	130,0-170,0	300	19,0-25,0
900	161,0-175,0							
800	147,0-153,0							

AC-Nr. 4 394 805

900	187,0-193,0	920			100	130,0-170,0	300	27,0-33,0
700	162,0-168,0							

AC-Nr. 4 394 807

900	200,0-206,0	920			100	130,0-170,0	300	27,0-33,0
700	184,0-190,0							

AC-Nr. 4 394 809

900	203,0-209,0	920			100	130,0-170,0	300	19,0-25,0
700	209,0-215,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Fuel delivery characteristics ⑤a high idle speed ⑤b		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 811

750	185,0-191,0	770	100	130,0-170,0	300	19,0-25,0
600	222,0-228,0					

AC-Nr. 4 394 813

800	210,0-218,0	820	100	130,0-170,0	300	19,0-25,0
600	223,0-229,0					

AC-Nr. 4 394 815

1050	222,0-228,0	1070	100	130,0-170,0	300	19,0-25,0
900	202,0-208,0					
700	207,0-213,0					

AC-Nr. 4 394 817

1000	240,0-246,0	1020	100	130,0-170,0	300	19,0-25,0
800	224,0-230,0					
600	237,0-243,0					

AC-Nr. 4 394 819

1050	245,0-251,0	1070	100	130,0-170,0	300	19,0-25,0
900	224,0-230,0					
700	237,0-243,0					

AC-Nr. 4 394 821

1000	217,0-223,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					
600	219,0-225,0					

AC-Nr. 4 394 823

900	210,0-216,0	920	100	130,0-170,0	300	27,0-33,0
700	212,0-218,0					

AC-Nr. 4 394 825

1050	269,0-275,0	1070	100	130,0-170,0	300	19,0-25,0
900	281,0-287,0					
700	293,0-299,0					

AC-Nr. 4 394 827

1050	234,0-240,0	1070	100	130,0-170,0	300	19,0-25,0
900	246,0-252,0					
700	268,0-274,0					

AC-Nr. 4 394 829

1050	262,0-268,0	1070	100	130,0-170,0	300	19,0-25,0
900	279,0-285,0					
700	289,0-295,0					

AC-Nr. 4 394 831

1050	241,0-247,0	1070	100	130,0-170,0	300	19,0-25,0
900	265,0-271,0					
700	268,0-274,0					

**Testoil-ISO 4113**

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 861

1050	296,0-302,0	1070			100	130,0-170,0	300	19,0-25,0
900	301,0-307,0							
700	309,0-315,0							

AC-Nr. 4 394 863

1050	253,0-256,0	1070			100	130,0-170,0	300	19,0-25,0
900	252,0-258,0							
700	269,0-275,0							

AC-Nr. 4 394 865

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 867

900	181,0-187,0	920			100	130,0-170,0	300	19,0-25,0
700	172,0-178,0							

AC-Nr. 4 394 869

925	176,0-182,0	945			100	130,0-170,0	300	19,0-25,0
800	162,0-168,0							
700	177,0-183,0							

AC-Nr. 4 394 871

900	173,0-179,0	920			100	130,0-170,0	300	19,0-25,0
800	160,0-166,0							

AC-Nr. 4 394 873

925	237,0-243,0	945			100	130,0-170,0	300	27,0-33,0
800	251,0-257,0							
700	269,0-275,0							

AC-Nr. 4 394 875

700	218,0-224,0	720			100	130,0-170,0	300	27,0-33,0
600	240,0-246,0							

AC-Nr. 4 394 877

1050	213,0-219,0	1060-1080			100	130,0-170,0	300	19,0-25,0
900	212,0-218,0							
700	240,0-246,0							

AC-Nr. 4 394 879

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	19,0-25,0
			700	258,5-269,5			
			600	255,5-266,0			

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 881

700 246,0 720 100 130,0-170,0 300 19,0-25,0  
600 263,0

AC-Nr. 4 394 883

1050 244,5-254,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 885

600 258,0 100 130,0-170,0 300 27,0

AC-Nr. 4 394 891

600 167,0-175,0 620 100 130,0-170,0 300 25,0

AC-Nr. 4 394 893

900 259,0-267,0 925 100 130,0-170,0 300 19,0-29,0  
700 238,0-246,0

AC-Nr. 4 394 895

1000 188,0-196,0 1025 100 130,0-170,0 300 25,0  
800 180,0-187,0

AC-Nr. 4 394 897

850 189,0-197,0 875 100 130,0-170,0 325 30,0  
750 185,0-193,0

AC-Nr. 4 394 899

900 175,0 925 100 130,0-170,0 300 19,0-25,0  
700 158,0

AC-Nr. 4 394 905

1000 239,0-247,0 1025 100 130,0-170,0 300 25,0  
700 229,0-235,0

AC-Nr. 4 394 907

900 161,0 925 100 130,0-170,0 300 19,0-25,0  
800 151,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 909

1050 202,0-210,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 911

1000 230,5-239,5 1010-1030 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 915

1000 203,0-211,5 1010-1030 100 130,0-170,0 300 19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0

# Test Specifications Fuel Injection Pumps ① and Governors

WPP 001/4 ALO 16,0 f

En

PE 6 P 120 A 420 LS 245 RQV 300...1050 PA 239 KR  
0 401 846 302  
1 - 5 - 3 - 6 - 2 - 4  
Values only apply to test nozzle-and-holder assembly 0 681 443 022 and fuel-injection test tubing 9 681 230 703.

supersedes  
company Allis-Chalmers  
engine 16000-25000

All test specifications are valid for Bosch Fuel Injection Pump Test Benches and Testers

## A. Fuel Injection Pump Settings

Port closing at prestroke 2,8 + 0,1 mm (from BDC)

Rotational speed rev/min 1	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Difference cm <sup>3</sup> / 100 strokes 4	Control rod travel mm 2	Fuel delivery cm <sup>3</sup> /100 strokes 3	Spring pre-tensioning (torque-control valve) mm 6
1000	12	26,4 - 27,1			1,0	
600	6	8,6 - 9,8				
	12	26,3 - 28,1				
	15	33,8 - 36,2				
200	6	4,2 - 5,2				

Adjust the fuel delivery from each outlet according to the values in

Testoil-ISO 4113

## B. Governor Settings

Upper rated speed			Intermediate rated speed			Lower rated speed			Sliding sleeve travel ①	
Degree of deflection of control lever 1	rev/min Control rod travel mm 2	Control rod travel mm rev/min ②a	Degree of deflection of control lever 4	rev/min 5	Control rod travel mm ④	Degree of deflection of control lever 7	rev/min 8	Control rod travel mm ③	rev/min 10	mm 11
66°	1050 1100 1150 1210 1300	15,0-18,0 10,7-15,0 6,0-11,6 0,7 0				10°	250 350 450 550	6,4-8,0 3,0-5,2 1,3-2,8 0		

Torque control travel a = mm

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Rotational-speed limitation intermediate speed ②b		Fuel delivery characteristics high idle speed ⑤a		Starting fuel delivery idle switching point ⑥		Torque-control travel ⑤	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	④a	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

Checking values in brackets

\* 1 mm less control rod travel than col. 2

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

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AC-Nr. 4 320 754	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 793	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 815	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 816	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 817	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 829	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 933	900	102,0-110,0	1040	800	107,0-116,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 939	900	98,5 $\pm$ 3	1040	700	107,5 $\pm$ 4	100	90,0-130,0	300	25,0
AC-Nr. 4 320 940	900	78,0- 86,0	1040	700	100,0-109,0	100	90,0-130,0	300	25,0
AC-Nr. 4 320 941	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 942	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 320 980	900	108,0-116,0	1120	800	-	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 320 981	900	111,0-119,0	1020	800	112,0-118,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 016	750	95,0-101,0	1020	750	95,0-101,0	100	90,0-130,0	300	25,0
AC-Nr. 4 321 064	1000	112,0	1030	800	112,5	100	90,0-130,0	300	25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 359 816	900	100,0-106,0	910-920	700 600	101,0-107,0 111,0-117,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 826	900	97,0-103,0	910-920	800	98,0-104,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 828	1100	139,0-143,0	1120	800 600	149,0-154,0 153,0-161,0	100	90,0-130,0	375	9,0-19,0
AC-Nr. 4 359 830	1025	91,0- 93,0	1040	700	99,0-103,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 359 832	1000	122,0-124,0	1020	700	126,0-130,0	100	90,0-130,0	300	19,0-25,0
AC-Nr. 4 392 693	1050	205,0-215,0	1065-80	900	167,0-177,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 695	900	149,0-155,0	920	-	-	-	-	300	19,0-25,0
AC-Nr. 4 392 697	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 699	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 701	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 703	1050	220,0-230,0	1060-70	900 700	200,0-210,0 205,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 707	1050	243,0-253,0	1060-80	900 700	222,0-232,0 235,0-245,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 709	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 711	600	231,0-237,0	620	-	-	-	-	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed rev/min ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 392 715								
1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 717								
1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 719								
1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 721								
1050	242,0-248,0	1070	900 700	220,0-226,0 230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 723								
750	244,0-250,0	770	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 725								
800	239,0-245,0	820	600	248,0-254,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 727								
900	232,0-238,0	920	700	253,0-259,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 729								
1000	212,0-218,0	1020	800	230,0-236,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 731								
900	288,0-294,0	920	700	287,0-293,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 392 735								
1050	239,0-245,0	1070	900 700	233,0-239,0 273,0-279,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 737								
1000	215,0-221,0	1020	800 600	197,0-203,0 220,0-226,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 739								
1050	207,0-213,0	1050	900 700	195,0-201,0 225,0-231,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 741								
1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 392 743								
1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm³/1000 strokes	rev/min	rev/min	cm³/1000 strokes	rev/min	cm³/1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 392 747								
1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 749								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 750								
1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 768								
800	123,0-133,0	820	600	132,0-142,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 775/776								
875	162,0-164,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 777								
950	205,0-207,0	970	700	195,0-199,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 778								
950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 3 392 779								
1025	190,0-200,0	1030-40	1000 900	191,0-201,0 178,0-188,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 781								
1025	228,0-238,0	1050-60	900 700	205,0-215,0 207,0-217,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 392 953								
940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 095								
1050	211,0-221,0	1060-80	900 700	210,0-220,0 238,0-248,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 307								
900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 393 431								
1050	208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 821								
1050	242,0-248,0	1070	900 700	220,0-226,0 230,0-236,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Starting fuel delivery idle switching point ⑥		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 393 823	1050	187,0-193,0	1070	900 700	174,0-180,0 175,0-181,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 825	1050	224,0-230,0	1070	800	185,0-191,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 827	1050	200,0-206,0	1070	900 700	190,0-196,0 214,0-220,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 829	1050	230,0-234,0	1070	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 831	1050	213,0-219,0	1070	900 700	202,0-208,0 230,0-236,0	100	130,0-170,0	-	-
AC-Nr. 4 393 833	1050	264,0	1060-1080	900	280,5	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 835	1050	220,0-226,0	1070	900 700	210,0-216,0 243,0-249,0	100	130,0-170,0	300	19,0,25,0
AC-Nr. 4 393 837	1050	227,0-233,0	1070	900 700	208,0-214,0 247,0-253,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 393 890	950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 393 891	955	208,0	965-975	895	203,0	-	-	-	-
AC-Nr. 4 393 961	900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 001	700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 017	950	208,0-214,0	990	750	196,0-202,0	100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 020	700	249,0-257,0	725	600	258,0-264,0	100	130,0-170,0	300	19,0-29,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm³/1000 strokes	rev/min	rev/min	cm³/1000 strokes	rev/min	cm³/1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 062	800	113,0-119,0	820	600	102,0-108,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 064	875	161,0-165,0	890	600	140,0-144,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 066	800	125,0-131,0	820	600	134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 068	1025	192,0-198,0	1045	900	180,0-186,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 070	1000	200,0-206,0	1020	800 600	180,0-186,0 189,0-195,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 072	940	185,0-195,0	955-65	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 074	1025	230,0-236,0	1040	900 700	207,0-213,0 209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 076	1000	227,0-233,0	1020	800	197,0-203,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 078	1000	235,0-241,0	1020	700	263,0-269,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 080	1000	220,0-226,0	1020	800 600	209,0-215,0 227,0-233,0	100	130,0-170,0	300	19,0,25,0
AC-Nr. 4 394 082	910	190,0	930	-	-	100	130,0-170,0	300	25,0
AC-Nr. 4 394 084	900	160,0-166,0	920	700	139,0-145,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 086	600	124,0-130,0	620	-	-	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 088	700	127,0-133,0	720	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 090	800	139,0-145,0	820	600	124,0-130,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 092	925	157,0-163,0	945	800 600	145,0-151,0 134,0-140,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 094	1000	180,0-186,0	1020	800 700	154,0-160,0 142,0-148,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 096	1050	207,0-213,0	1070	900 800	161,0-175,0 147,0-153,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 098	900	187,0-193,0	920	700	162,0-168,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 100	900	200,0-206,0	920	700	184,0-190,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 102	900	203,0-209,0	920	700	209,0-215,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 104	750	185,0-191,0	770	600	222,0-228,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 106	800	210,0-218,0	820	600	223,0-229,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 108	1050	222,0-228,0	1070	900 700	202,0-208,0 207,0-213,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 110	1000	240,0-246,0	1020	800 600	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 112	1050	245,0-251,0	1070	900 700	224,0-230,0 237,0-243,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 114	1000	217,0-223,0	1020	800 600	197,0-203,0 219,0-225,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 116	900	210,0-216,0	920	700	212,0-218,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 118	1050	269,0-275,0	1070	900 700	281,0-287,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) ②		Breakaway ②b intermediate speed ④a	Full-load delivery ② Control-rod stop Test oil temp. 40°C (104°F)		Starting fuel delivery ⑥ Idle switching point		Low idle speed ⑤	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 120

1050 234,0-240,0 1070 900 246,0-252,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 122

1050 262,0-268,0 1070 900 279,0-285,0 100 130,0-170,0 300 19,0-25,0  
700 289,0-295,0

AC-Nr. 4 394 124

1050 241,0-247,0 1070 900 265,0-271,0 100 130,0-170,0 300 19,0-25,0  
700 268,0-274,0

AC-Nr. 4 394 126

900 232,0-238,0 920 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 128

750 244,0-250,0 770 700 253,0-259,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 130

800 239,0-245,0 820 600 248,0-254,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 132

1000 212,0-218,0 1020 800 230,0-236,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 134

900 288,0-294,0 920 700 287,0-293,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 136

1000 255,0-261,0 1020 800 272,0-278,0 100 130,0-170,0 300 19,0-25,0  
600 270,0-276,0

AC-Nr. 4 394 138

1050 239,0-245,0 1070 900 233,0-239,0 100 130,0-170,0 300 19,0-25,0  
700 273,0-279,0

AC-Nr. 4 394 140

1000 215,0-221,0 1020 800 197,0-203,0 100 130,0-170,0 300 19,0-25,0  
600 220,0-226,0

AC-Nr. 4 394 142

900 222,0-228,0 920 700 254,0-260,0 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 144

1050 257,0-263,0 1070 750 272,0-278,0 100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 148

1050 295,0-303,0 1075 900 309,0-315,0 100 130,0-170,0 300 25,0

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Starting fuel delivery Idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	1	2	6	7	8	9

AC-Nr. 4 394 150	1050	268,0-274,0	1070	900 700	274,0-280,0 280,0-286,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 152	1050	262,0-268,0	1070	900 700	267,0-273,0 267,0-273,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 154	1050	279,0-285,0	1070	900 700	283,0-289,0 293,0-299,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 156	1050	296,0-302,0	1070	900 700	301,0-307,0 309,0-315,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 158 4 394 157	1050	253,0-256,0	1070	900 700	252,0-258,0 269,0-275,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 160	1050	208,0-214,0	1070	900 700	230,0-235,0 260,0-266,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 162	900	181,0-187,0	920	700	172,0-178,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 164	925	176,0-182,0	945	800 700	162,0-168,0 177,0-183,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 166	900	173,0-179,0	920	800	160,0-166,0	100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 168	925	237,0-243,0	945	800 700	251,0-257,0 269,0-275,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 170	700	218,0-224,0	720	600	240,0-246,0	100	130,0-170,0	300	27,0-33,0
AC-Nr. 4 394 176	1050	213,0-219,0	1070	900 700	212,0-218,0 240,0-246,0	100	130,0-170,0	300	19,0-25,0

## C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min (4a)	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 246

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	300	19,0-25,0
			700	258,5-269,5				
			600	255,5-266,0				

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

AC-Nr. 4 394 248

700	246,0	720			100	130,0-170,0	300	19,0-25,0
600	263,0							

AC-Nr. 4 394 250

1050	244,5-254,5	1060-1080			100	130,0-170,0	300	19,0-25,0
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AC-Nr. 4 394 257

600	258,0				100	130,0-170,0	300	27,0
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AC-Nr. 4 394 314

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 331

1050	241,0-247,0	1070			100	130,0-170,0	300	19,0-25,0
900	265,0-271,0							
700	268,0-274,0							

AC-Nr. 4 394 332

1050	268,0-274,0	1070			100	130,0-170,0	300	19,0-25,0
900	274,0-280,0							
700	280,0-286,0							

AC-Nr. 4 394 347

1050	269,0-275,0	1070			100	130,0-170,0	300	19,0-25,0
900	281,0-287,0							
700	293,0-299,0							

AC-Nr. 4 394 348

1050	234,0-240,0	1070			100	130,0-170,0	300	19,0-25,0
900	246,0-252,0							
700	268,0-274,0							

AC-Nr. 4 394 349

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 350

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	279,0-285,0							
700	289,0-295,0							

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 351

1050	253,0-256,0	1070			100	130,0-170,0	300	19,0-25,0
900	252,0-258,0							
700	269,0-275,0							

AC-Nr. 4 394 352

1050	262,0-268,0	1070			100	130,0-170,0	300	19,0-25,0
900	267,0-273,0							
700	267,0-273,0							

AC-Nr. 4 394 353

1050	279,0-285,0	1070			100	130,0-170,0	300	19,0-25,0
900	283,0-289,0							
700	293,0-299,0							

AC-Nr. 4 394 354

1050	296,0-302,0	1070			100	130,0-170,0	300	19,0-25,0
900	301,0-307,0							
700	309,0-315,0							

AC-Nr. 4 394 356

1050	246,0	1070			100	130,0-170,0	300	19,0-25,0
900	240,0							
700	267,0							

AC-Nr. 4 394 386

600	167,0-175,0	620			100	130,0-170,0	300	25,0
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AC-Nr. 4 394 390

900	259,0-267,0	925			100	130,0-170,0	300	19,0-29,0
700	238,0-246,0							

AC-Nr. 4 394 428

1000	188,0-196,0	1025			100	130,0-170,0	300	25,0
800	180,0-187,0							

AC-Nr. 4 394 473

850	189,0-197,0	875			100	130,0-170,0	325	30,0
750	185,0-193,0							

AC-Nr. 4 394 501

900	175,0	925			100	130,0-170,0	300	19,0-25,0
700	158,0							

AC-Nr. 4 394 521

1000	239,0-247,0	1025			100	130,0-170,0	300	25,0
700	229,0-235,0							

AC-Nr. 4 394 527

900	161,0	925			100	130,0-170,0	300	19,0-25,0
800	151,0							

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 541	1050 202,0-210,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 550	1000 230,5-239,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 561	1050 258,0 900 256,0	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 564	1050 244,0 900 234,0	1070			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 569	1000 203,0-211,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 590	1050 260,5-271,0	1060-1080			100	130,0-170,0	300	19,0-25,0
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".								
AC-Nr. 4 394 593	1050 251,5-261,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 703	1050 260,5-271,0	1060-1080	900 267,0-278,0 700 267,0-278,0		100	130,0-170,0	300	19,0-25,0
Tilt stop part position to obtain quantity at 1050 PRM. Adjust stop part position to obtain mean curve above. Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".								
AC-Nr. 4 394 705 " 4 394 706	1050 258,0 900 256,0	1060-1080			100	130,0-170	300	19,0-25,0
AC-Nr. 4 394 707	1050 244,0 900 234,0	1070			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 718	955 198,0-213,0 800 196,0-210,0	965-975			100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 719	875 166,0-168,0 600 142,5-146,5	915			100	130,0-170,0	300	21,0-27,0
AC-Nr. 4 394 733	1000 255,0-261,0 800 272,0-278,0 600 270,0-276,0	1020			100	130,0-170,0	300	19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 740/741								
1020	213,0-226,0	1030-1040						
915	208,0-218,0							
AC-Nr. 4 394 744								
1050	250,0	1060-1080			100	130,0-170,0	300	19,0-25,0
900	256,0							
AC-Nr. 4 394 745								
950	208,0-214,0	990			100	130,0-170,0	300	21,0-27,0
750	196,0-202,0							
AC-Nr. 4 394 746								
875	161,0-165,0	890			100	130,0-170,0	300	19,0-25,0
600	140,0-144,0							
AC-Nr. 4 394 771								
800	113,0-119,0	820			100	130,0-170,0	300	19,0-25,0
600	102,0-108,0							
AC-Nr. 4 394 773								
800	125,0-131,0	820			100	130,0-170,0	300	19,0-25,0
600	134,0-140,0							
AC-Nr. 4 394 775								
1025	192,0-198,0	1045			100	130,0-170,0	300	19,0-25,0
900	180,0-186,0							
AC-Nr. 4 394 777								
1000	200,0-206,0	1020			100	130,0-170,0	300	19,0-25,0
800	180,0-186,0							
600	189,0-195,0							
AC-Nr. 4 394 779								
940	185,0-195,0	955-65			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 781								
1025	230,0-236,0	1040			100	130,0-170,0	300	19,0-25,0
900	207,0-213,0							
700	209,0-215,0							
AC-Nr. 4 394 783								
1000	227,0-233,0	1020			100	130,0-170,0	300	19,0-25,0
800	197,0-203,0							
AC-Nr. 4 394 785								
1000	235,0-241,0	1020			100	130,0-170,0	300	19,0-25,0
700	263,0-269,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 787								
1000	220,0-226,0	1020			100	130,0-170,0	300	19,0-25,0
800	209,0-215,0							
600	227,0-233,0							
AC-Nr. 4 394 789								
910	190,0	930			100	130,0-170,0	300	25,0
AC-Nr. 4 394 791								
900	160,0-166,0	920			100	130,0-170,0	300	19,0-25,0
700	139,0-145,0							
AC-Nr. 4 394 793								
600	124,0-130,0	620			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 795								
700	127,0-133,0	720			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							
AC-Nr. 4 394 797								
800	139,0-145,0	820			100	130,0-170,0	300	19,0-25,0
600	124,0-130,0							
AC-Nr. 4 394 799								
925	157,0-163,0	945			100	130,0-170,0	300	19,0-25,0
800	145,0-151,0							
600	134,0-140,0							
AC-Nr. 4 394 801								
1000	180,0-186,0	1020			100	130,0-170,0	300	19,0-25,0
800	154,0-160,0							
700	142,0-148,0							
AC-Nr. 4 394 803								
1050	207,0-213,0	1070			100	130,0-170,0	300	19,0-25,0
900	161,0-175,0							
800	147,0-153,0							
AC-Nr. 4 394 805								
900	187,0-193,0	920			100	130,0-170,0	300	27,0-33,0
700	162,0-168,0							
AC-Nr. 4 394 807								
900	200,0-206,0	920			100	130,0-170,0	300	27,0-33,0
700	184,0-190,0							
AC-Nr. 4 394 809								
900	203,0-209,0	920			100	130,0-170,0	300	19,0-25,0
700	209,0-215,0							

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 811

750	185,0-191,0	770	100	130,0-170,0	300	19,0-25,0
600	222,0-228,0					

AC-Nr. 4 394 813

800	210,0-218,0	820	100	130,0-170,0	300	19,0-25,0
600	223,0-229,0					

AC-Nr. 4 394 815

1050	222,0-228,0	1070	100	130,0-170,0	300	19,0-25,0
900	202,0-208,0					
700	207,0-213,0					

AC-Nr. 4 394 817

1000	240,0-246,0	1020	100	130,0-170,0	300	19,0-25,0
800	224,0-230,0					
600	237,0-243,0					

AC-Nr. 4 394 819

1050	245,0-251,0	1070	100	130,0-170,0	300	19,0-25,0
900	224,0-230,0					
700	237,0-243,0					

AC-Nr. 4 394 821

1000	217,0-223,0	1020	100	130,0-170,0	300	19,0-25,0
800	197,0-203,0					
600	219,0-225,0					

AC-Nr. 4 394 823

900	210,0-216,0	920	100	130,0-170,0	300	27,0-33,0
700	212,0-218,0					

AC-Nr. 4 394 825

1050	269,0-275,0	1070	100	130,0-170,0	300	19,0-25,0
900	281,0-287,0					
700	293,0-299,0					

AC-Nr. 4 394 827

1050	234,0-240,0	1070	100	130,0-170,0	300	19,0-25,0
900	246,0-252,0					
700	268,0-274,0					

AC-Nr. 4 394 829

1050	262,0-268,0	1070	100	130,0-170,0	300	19,0-25,0
900	279,0-285,0					
700	289,0-295,0					

AC-Nr. 4 394 831

1050	241,0-247,0	1070	100	130,0-170,0	300	19,0-25,0
900	265,0-271,0					
700	268,0-274,0					

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a) rev/min	Fuel delivery characteristics (5a) high idle speed (5b) rev/min   cm <sup>3</sup> /1000 strokes		Starting fuel delivery idle switching point (6) rev/min   cm <sup>3</sup> /1000 strokes		Low idle speed (5) rev/min   Control rod travel mm	
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 833

900 232,0-238,0  
700 253,0-259,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 835

750 244,0-250,0  
700 253,0-259,0

770

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 837

800 239,0-245,0  
600 248,0-254,0

820

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 839

1000 212,0-218,0  
800 230,0-236,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 841

900 288,0-294,0  
700 287,0-293,0

920

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 843

1000 255,0-261,0  
800 272,0-278,0  
600 270,0-276,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 845

1050 239,0-245,0  
900 233,0-239,0  
700 273,0-279,0

1070

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 847

1000 215,0-221,0  
800 197,0-203,0  
600 220,0-226,0

1020

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 849

900 222,0-228,0  
700 254,0-260,0

920

100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 851

1050 257,0-263,0  
750 272,0-278,0

1070

100 130,0-170,0 300 27,0-33,0

AC-Nr. 4 394 853

1050 295,0-303,0  
900 309,0-315,0

1075

100 130,0-170,0 300 25,0

AC-Nr. 4 394 857

1050 262,0-268,0  
900 267,0-273,0  
700 267,0-273,0

1070

100 130,0-170,0 300 19,0-25,0

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

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AC-Nr. 4 394 861

1050	296,0-302,0	1070			100	130,0-170,0	300	19,0-25,0
900	301,0-307,0							
700	309,0-315,0							

AC-Nr. 4 394 863

1050	253,0-256,0	1070			100	130,0-170,0	300	19,0-25,0
900	252,0-258,0							
700	269,0-275,0							

AC-Nr. 4 394 865

1050	208,0-214,0	1070			100	130,0-170,0	300	19,0-25,0
900	230,0-236,0							
700	260,0-266,0							

AC-Nr. 4 394 867

900	181,0-187,0	920			100	130,0-170,0	300	19,0-25,0
700	172,0-178,0							

AC-Nr. 4 394 869

925	176,0-182,0	945			100	130,0-170,0	300	19,0-25,0
800	162,0-168,0							
700	177,0-183,0							

AC-Nr. 4 394 871

900	173,0-179,0	920			100	130,0-170,0	300	19,0-25,0
800	160,0-166,0							

AC-Nr. 4 394 873

925	237,0-243,0	945			100	130,0-170,0	300	27,0-33,0
800	251,0-257,0							
700	269,0-275,0							

AC-Nr. 4 394 875

700	218,0-224,0	720			100	130,0-170,0	300	27,0-33,0
600	240,0-246,0							

AC-Nr. 4 394 877

1050	213,0-219,0	1060-1080			100	130,0-170,0	300	19,0-25,0
900	212,0-218,0							
700	240,0-246,0							

AC-Nr. 4 394 879

1050	211,0-220,0	1055-1075	975	237,5-247,0	100	130,0-170,0	19,0-25,0
			700	258,5-269,5			
			600	255,5-266,0			

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.

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### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min	cm <sup>3</sup> /1000 strokes	rev/min	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	cm <sup>3</sup> /1000 strokes	rev/min	Control rod travel mm
1	2	3	4	5	6	7	8	9

AC-Nr. 4 394 881								
700	246,0	720			100	130,0-170,0	300	19,0-25,0
600	263,0							
AC-Nr. 4 394 883								
1050	244,5-254,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 885								
600	258,0				100	130,0-170,0	300	27,0
AC-Nr. 4 394 891								
600	167,0-175,0	620			100	130,0-170,0	300	25,0
AC-Nr. 4 394 893								
900	259,0-267,0	925			100	130,0-170,0	300	19,0-29,0
700	238,0-246,0							
AC-Nr. 4 394 895								
1000	188,0-196,0	1025			100	130,0-170,0	300	25,0
800	180,0-187,0							
AC-Nr. 4 394 897								
850	189,0-197,0	875			100	130,0-170,0	325	30,0
750	185,0-193,0							
AC-Nr. 4 394 899								
900	175,0	925			100	130,0-170,0	300	19,0-25,0
700	158,0							
AC-Nr. 4 394 905								
1000	239,0-247,0	1025			100	130,0-170,0	300	25,0
700	229,0-235,0							
AC-Nr. 4 394 907								
900	161,0	925			100	130,0-170,0	300	19,0-25,0
800	151,0							
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and 0,90 bar pressure, gap should be "020".								
AC-Nr. 4 394 909								
1050	202,0-210,5	1060-1080			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 911								
1000	230,5-239,5	1010-1030			100	130,0-170,0	300	19,0-25,0
AC-Nr. 4 394 915								
1000	203,0-211,5	1010-1030			100	130,0-170,0	300	19,0-25,0

### C. Settings for Fuel Injection Pump with Fitted Governor

Full-load delivery Control-rod stop Test oil temp. 40°C (104°F) (2)		Breakaway (2b) intermediate speed (4a)	Fuel delivery characteristics (5a) high idle speed (5b)		Starting fuel delivery idle switching point (6)		Low idle speed (5)	
rev/min 1	cm <sup>3</sup> /1000 strokes 2	rev/min 3	rev/min 4	cm <sup>3</sup> /1000 strokes 5	rev/min 6	cm <sup>3</sup> /1000 strokes 7	rev/min 8	Control rod travel mm 9

AC-Nr. 4 394 917

1050 260,5-271,0 1060-1080 100 130,0-170,0 300 19,0-25,0

Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 919

1050 215,5-261,5 1060-1080 100 130,0-170,0 300 19,0-25,0

AC-Nr. 4 394 921

1050 260,5-271,0 1060-1080 900 267,0-278,0 100 130,0-170,0 300 19,0-25,0  
700 267,0-278,0

Tilt stop part position to obtain quantity at 1050 PRM.  
Adjust stop part position to obtain mean curve above.  
Beginning of movement: 0,40 - 0,45 bar at 750 PRM and  
0,90 bar pressure, gap should be "020".

AC-Nr. 4 394 925

1050 244,0 1070 100 130,0-170,0 300 19,0-25,0  
900 234,0

AC-Nr. 4 394 997

900 173,0-179,0 920 100 130,0-170,0 300 19,0-25,0  
800 160,0-166,0